



P/NO : AFN30024602

MAY, 2020

SERVICE MANUAL

MODEL: SN7Y (SN7Y, SPN5B-W)



Wireless Sound Bar **SERVICE MANUAL**

MODEL: SN7Y
(SN7Y, SPN5B-W)

CAUTION

BEFORE SERVICING THE UNIT, READ THE “SAFETY PRECAUTIONS” IN THIS MANUAL.



LG

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SECTION 1

SUMMARY

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PRODUCT SAFETY SERVICING GUIDELINES FOR AUDIO PRODUCTS

IMPORTANT SAFETY NOTICE

This manual was prepared for use only by properly trained audio-video service technicians.

When servicing this product, under no circumstances should the original design be modified or altered without permission from LG Corporation. All components should be replaced only with types identical to those in the original circuit and their physical location, wiring and lead dress must conform to original layout upon completion of repairs.

Special components are also used to prevent x-radiation, shock and fire hazard.

These components are indicated by the letter "x" included in their component designators and are required to maintain safe performance. No deviations are allowed without prior approval by LG Corporation.

Circuit diagrams may occasionally differ from the actual circuit used. This way, implementation of the latest safety and performance improvement changes into the set is not delayed until the new service literature is printed.

CAUTION : Do not attempt to modify this product in any way. Never perform customized installations without manufacturer's approval. Unauthorized modifications will not only void the warranty, but may lead to property damage or user injury.

Service work should be performed only after you are thoroughly familiar with these safety checks and servicing guidelines.

GRAPHIC SYMBOLS



The exclamation point within an equilateral triangle is intended to alert the service personnel to important safety information in the service literature.



The lightning flash with arrowhead symbol within an equilateral triangle is intended to alert the service personnel to the presence of noninsulated "dangerous voltage" that may be of sufficient magnitude to constitute a risk of electric shock.



The pictorial representation of a fuse and its rating within an equilateral triangle is intended to convey to the service personnel the following fuse replacement caution notice:

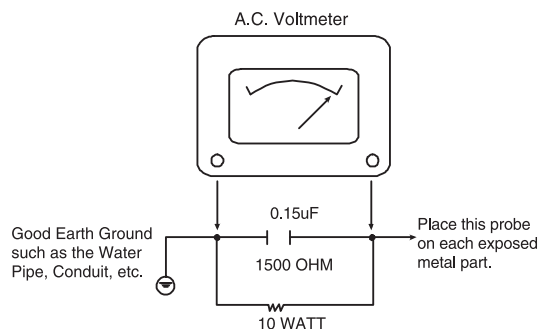
CAUTION : FOR CONTINUED PROTECTION AGAINST RISK OF FIRE, REPLACE ALL FUSES WITH THE SAME TYPE AND RATING AS MARKED NEAR EACH FUSE.

SERVICE INFORMATION

While servicing, use an isolation transformer for protection from AC line shock. After the original service problem has been corrected, make a check of the following:

FIRE AND SHOCK HAZARD

1. Be sure that all components are positioned to avoid a possibility of adjacent component shorts. This is especially important on items transported to and from the repair shop.
2. Verify that all protective devices such as insulators, barriers, covers, shields, strain reliefs, power supply cords, and other hardware have been reinstalled per the original design. Be sure that the safety purpose of the polarized line plug has not been defeated.
3. Soldering must be inspected to discover possible cold solder joints, solder splashes, or sharp solder points. Be certain to remove all loose foreign particles.
4. Check for physical evidence of damage or deterioration to parts and components, for frayed leads or damaged insulation (including the AC cord), and replace if necessary.
5. No lead or component should touch a high current device or a resistor rated at 1 watt or more. Lead tension around protruding metal surfaces must be avoided.
6. After reassembly of the set, always perform an AC leakage test on all exposed metallic parts of the cabinet (the channel selector knobs, antenna terminals, handle and screws) to be sure that set is safe to operate without danger of electrical shock. **DO NOT USE A LINE ISOLATION TRANSFORMER DURING THIS TEST.** Use an AC voltmeter having 5000 ohms per volt or more sensitivity in the following manner: Connect a 1500 ohm, 10 watt resistor, paralleled by a .15 mfd 150V AC type capacitor between a known good earth ground water pipe, conduit, etc.) and the exposed metallic parts, one at a time. Measure the AC voltage across the combination of 1500 ohm resistor and .15 mfd capacitor. Reverse the AC plug by using a non-polarized adaptor and repeat AC voltage measurements for each exposed metallic part. Voltage measured must not exceed 0.75 volts RMS. This corresponds to 0.5 milliamp AC. Any value exceeding this limit constitutes a potential shock hazard and must be corrected immediately.



TIPS ON PROPER INSTALLATION

1. Never install any receiver in a closed-in recess, cubbyhole, or closely fitting shelf space over, or close to, a heat duct, or in the path of heated air flow.
2. Avoid conditions of high humidity such as: outdoor patio installations where dew is a factor, near steam radiators where steam leakage is a factor, etc.
3. Avoid placement where draperies may obstruct venting. The customer should also avoid the use of decorative scarves or other coverings that might obstruct ventilation.
4. Wall- and shelf-mounted installations using a commercial mounting kit must follow the factory-approved mounting instructions. A product mounted to a shelf or platform must retain its original feet (or the equivalent thickness in spacers) to provide adequate air flow across the bottom. Bolts or screws used for fasteners must not touch any parts or wiring. Perform leakage tests on customized installations.
5. Caution customers against mounting a product on a sloping shelf or in a tilted position, unless the receiver is properly secured.
6. A product on a roll-about cart should be stable in its mounting to the cart. Caution the customer on the hazards of trying to roll a cart with small casters across thresholds or deep pile carpets.
7. Caution customers against using extension cords. Explain that a forest of extensions, sprouting from a single outlet, can lead to disastrous consequences to home and family.

SERVICING PRECAUTIONS

CAUTION: Before servicing the Audio products covered by this service data and its supplements and addends, read and follow the SAFETY PRECAUTIONS.

NOTE: if unforeseen circumstances create conflict between the following servicing precautions and any of the safety precautions in this publication, always follow the safety precautions.

Remember Safety First :

General Servicing Precautions

1. Always unplug the Audio products AC power cord from the AC power source before:
 - (1) Removing or reinstalling any component, circuit board, module, or any other assembly.
 - (2) Disconnecting or reconnecting any internal electrical plug or other electrical connection.
 - (3) Connecting a test substitute in parallel with an electrolytic capacitor.
Caution: A wrong part substitution or incorrect polarity installation of electrolytic capacitors may result in an explosion hazard.
2. Do not spray chemicals on or near this Audio products or any of its assemblies.
3. Unless specified otherwise in this service data, clean electrical contacts by applying an appropriate contact cleaning solution to the contacts with a pipe cleaner, cotton-tipped swab, or comparable soft applicator.
Unless specified otherwise in this service data, lubrication of contacts is not required.
4. Do not defeat any plug/socket B+ voltage interlocks with which instruments covered by this service manual might be equipped.
5. Do not apply AC power to this Audio products and / or any of its electrical assemblies unless all solid state device heat sinks are correctly installed.
6. Always connect the test instrument ground lead to an appropriate ground before connecting the test instrument positive lead. Always remove the test instrument ground lead last.

Insulation Checking Procedure

Disconnect the attachment plug from the AC outlet and turn the power on. Connect an insulation resistance meter (500V) to the blades of the attachment plug. The insulation resistance between each blade of the attachment plug and accessible conductive parts (Note 1) should be more than 1Mohm.

Note 1: Accessible Conductive Parts include Metal panels, Input terminals, Earphone jacks, etc.

Electrostatically Sensitive (ES) Devices

Some semiconductor (solid state) devices can be damaged easily by static electricity. Such components commonly are called Electrostatically Sensitive (ES) Devices. Examples of typical ES devices are integrated circuits and some field effect transistors and semiconductor chip components.



The following techniques should be used to help reduce the incidence of component damage caused by static electricity.

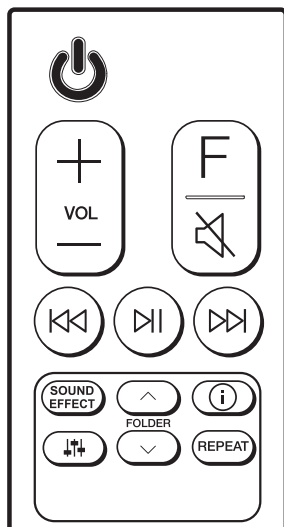
1. Immediately before handling any semiconductor component or semiconductor-equipped assembly, drain off any electrostatic charge on your body by touching a known earth ground. Alternatively, obtain and wear a commercially available discharging wrist strap device, which should be removed for potential shock reasons prior to applying power to the unit under test.
2. After removing an electrical assembly equipped with ES devices, place the assembly on a conductive surface such as aluminum foil, to prevent electrostatic charge buildup or exposure of the assembly.
3. Use only a grounded-tip soldering iron to solder or unsolder ES devices.
4. Use only an anti-static solder removal device. Some solder removal devices not classified as "anti-static" can generate electrical charges sufficient to damage ES devices.
5. Do not use freon-propelled chemicals. These can generate an electrical charge sufficient to damage ES devices.
6. Do not remove a replacement ES device from its protective package until immediately before you are ready to install it. (Most replacement ES devices are packaged with leads electrically shorted together by conductive foam, aluminum foil, or comparable conductive material).
7. Immediately before removing the protective material from the leads of a replacement ES device, touch the protective material to the chassis or circuit assembly into which the device will be installed.

Caution: Be sure no power is applied to the chassis or circuit, and observe all other safety precautions.

8. Minimize bodily motions when handling unpackaged replacement ES devices. (Normally harmless motion such as the brushing together of your clothes fabric or the lifting of your foot from a carpeted floor can generate static electricity sufficient to damage an ES device.)

HIDDEN KEY MODE

HIDDEN MODE	KEYS
EEPROM OPTION EDIT	Main unit 'VOL-' + Remote Control '  '
EEPROM CLEAR (Initialize)	Main unit 'VOL-' + Remote Control '  '
VERSION CHECK	Main unit 'VOL-' + Remote Control 'Play/Pause'



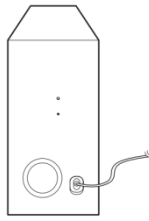
SOFTWARE UPDATE GUIDE

1. Preparation

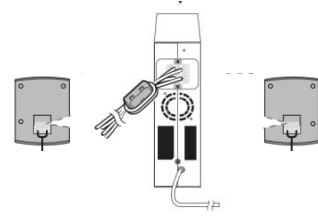
- 1) SN7 Series Units : Main Unit, Wireless Subwoofer Unit (Only for SN7Y), Rear Speaker Unit.
- 2) SN7 RCU.
- 3) USB Memory.
- 4) Android device with “Music Flow Bluetooth” app for FOTA Update.



<Main Unit>
Necessary



**<Wireless Subwoofer Unit
- Only for SN7Y >**
If wireless subwoofer rx module
of primary unit is updated



<Rear Speaker Unit>
Optional as model suffix
If wireless rear rx module is
updated



<RCU>
Necessary



<USB Memory>
for USB update



<Android Device>
“Music Flow Bluetooth” must be
installed for FOTA update

Caution:

- Take care not to power off during update.

2. Using USB

Step 1. Prepare SN7 update binaries.

Update module	Prefix & Extension	Filename Sample
B/E	MAIN_SN7*.BIN	MAIN_SN7_BAR_200122A.BIN
Micom	MICOM_SN7*.HEX	MICOM_SN7_BAR_2001220_E8F6_rev1431.HEX
Wireless Subwoofer Tx (Only for SN7Y)	WOOFERTX_SN7*.BIN	WOOFERTX_SN7_200005_191028_Checksum_6D43.bin
Wireless Subwoofer Rx (Only for SN7Y)	WOOFERRX_SN7*.BIN	WOOFERRX_SN7_201005_191112_Checksum_4BB9.bin
Wireless Rear Tx	REARTX_SN7*.BIN	REARTX_SN7_204003_191126_Checksum_269F.bin
Wireless Rear Rx	REARRX_SN7*.BIN	REARRX_SN7_Ver185001_171128_checksum_DFDF.bin
Front Touch IC	TOUCH_SN7*.dld	TOUCH_SN7_2001073_0xF171.HEX
MEQ	MEQ_SN7*.BIN	MEQ_SN7CY_BAR_200103D3_210828.BIN
PEQ	PEQ_SN7*.BIN	PEQ_SN7CY_BAR_1912260_6326.BIN
Option	OPT*.BIN	OPT_SN7.BIN

• In case of MEQ/PEQ, file name could be changed as Suffix.

Ex) SN7CY: MEQ_SN7CY_BAR_200103D3_210828.BIN

SN7Y: MEQ_SN7Y_BAR_200102BE_190315.BIN

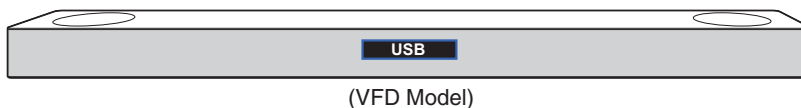
Step 2. Copy all updated SN7 binaries to USB memory.

Step 3. Power on SN7 main unit.

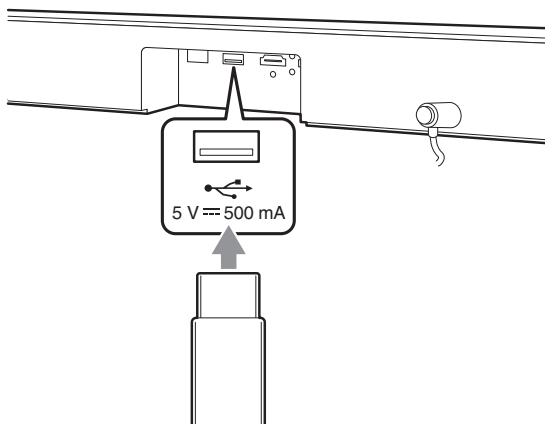
Step 4. If there is an updated wireless subwoofer rx binary in update list,
you need to pair between main unit and subwoofer unit before start update. (Only for SN7Y)

Step 5. If there is an updated wireless rear rx binary in update list,
you need to pair between main unit and rear speaker unit before start update.

Step 6. Press Function key to change function to USB.
Verify whether USB function is or not by VFD.



Step 7. Attach USB which has update binaries to the USB slot back of SN7 main unit.



Using USB

Step 8. Update will start automatically.

VFD Model : Check VFD what module is in progress one by one.

- In case of MEQ/PEQ, update will be progressed in short time since binary size are small, so may not be recognized.

*5 char- Scroll

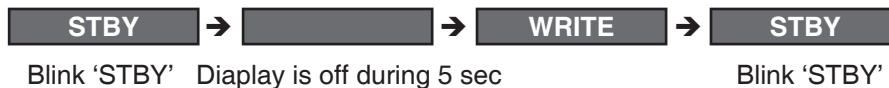
Update module	VFD display
B/E	B-UPDATE
MICOM	M-UPDATE
Wireless Subwoofer Tx	WT 00
Wireless Subwoofer Rx	WR 00
Wireless Rear Tx	RT 00
Wireless Rear Rx	RR 00
Front Touch IC	T-UPDATE
MEQ	MQ-UPDATE
PEQ	EQ-UPDATE
Option	WRITE

< SN7 Series VFD Display in Update >

※ The numbers in VFD display of wireless modules will increase in progress as progress percent from 00 to 100.

Step 9. SN7 main unit will be off automatically after update finish. (Enter Standby Mode)

Step 10. In case of option, SN7 will be powered off and then power on.

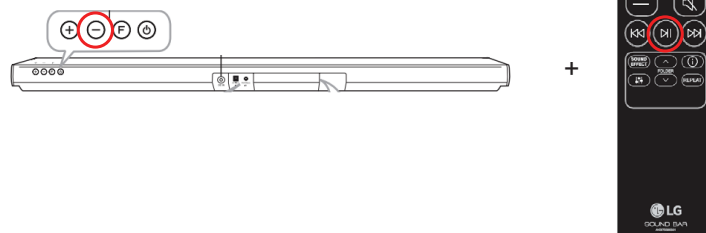


Step 11. Check the current versions to verify whether the update was successfully completed or not.

<VFD Model>

1) Press "Version Check" hidden key

- Version Check Hidden Key : Press Set "Vol-" + RCU "Play/Pause" for 3secs.



Using USB

2) SN7 shows the version of all modules in the order shown below.

MICOM ➡ PEQ ➡ B/E ➡ MEQ ➡ Wireless Subwoofer Tx ➡ Wireless Subwoofer Rx
➡ Wireless Rear Tx ➡ Wireless Rear Rx ➡ Front Touch IC ➡ Option

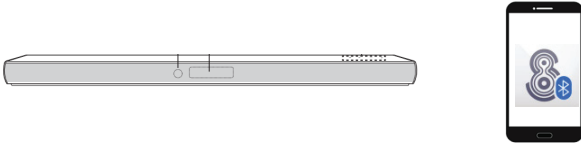
Module	VFD display sample
MICOM	M2001151
PEQ	PQ1912260-6326
B/E	B2001221
MEQ	MQ200103D3
Wireless Subwoofer Tx	TX2000050
Wireless Subwoofer Rx	RX2000050
Wireless Rear Tx	RT2040030
Wireless Rear Rx	RR1850010
Front Touch IC	T1912307
Option	00 55 1A 44 ...

<SN7 VFD version display>

3) Compare the version VFD shows and you updated.

3. Using APP (FOTA : Firmware update Over The Air)

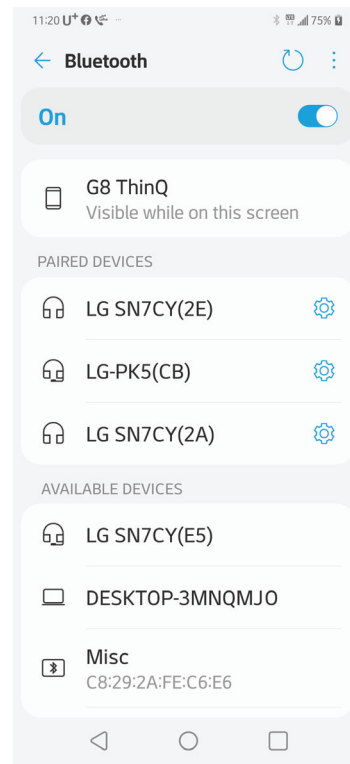
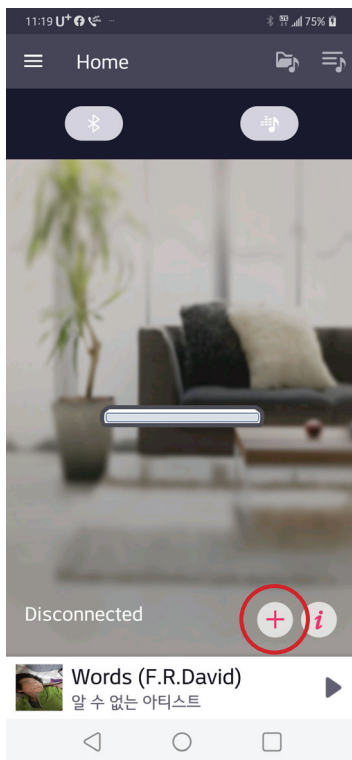
Step 1. Prepare SN7 main unit and Android Device with “Music Flow Bluetooth”. FOTA Update only supports B/E(Main) and MICOM module update.



Step 2. Power on SN7 main unit.

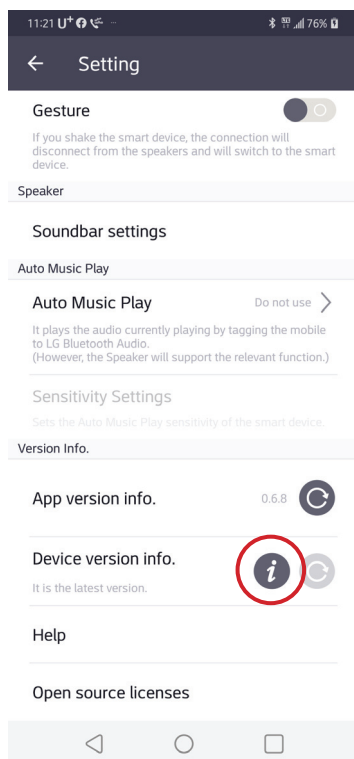
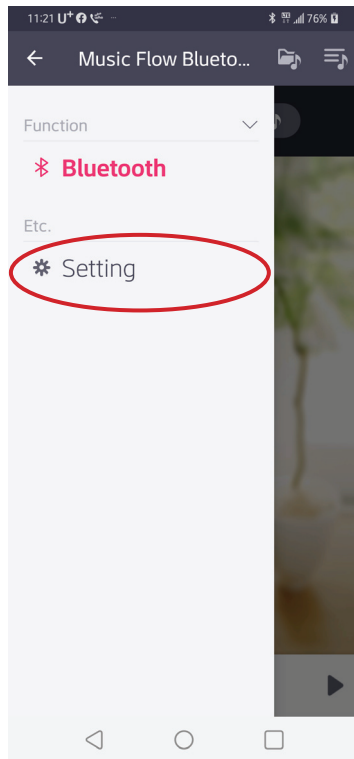
Step 3. Execute “Music Flow Bluetooth” App.

Step 4. Connect between android device and SN7 main unit by “Music Flow Bluetooth” App.

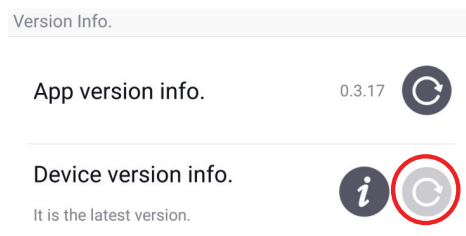
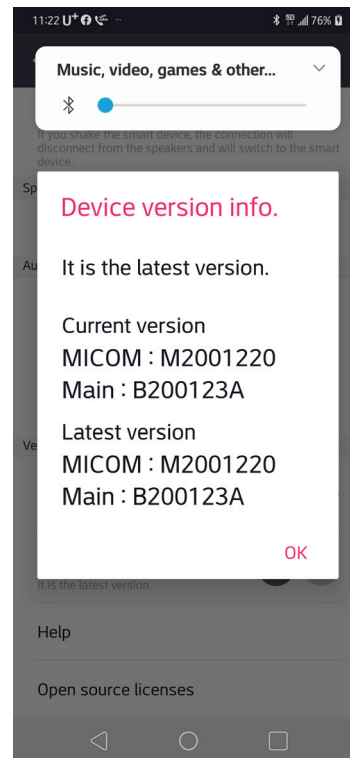


Using APP (FOTA : Firmware update Over The Air)

Step 5. Check the SN7 current version with “Music Flow Bluetooth” App.

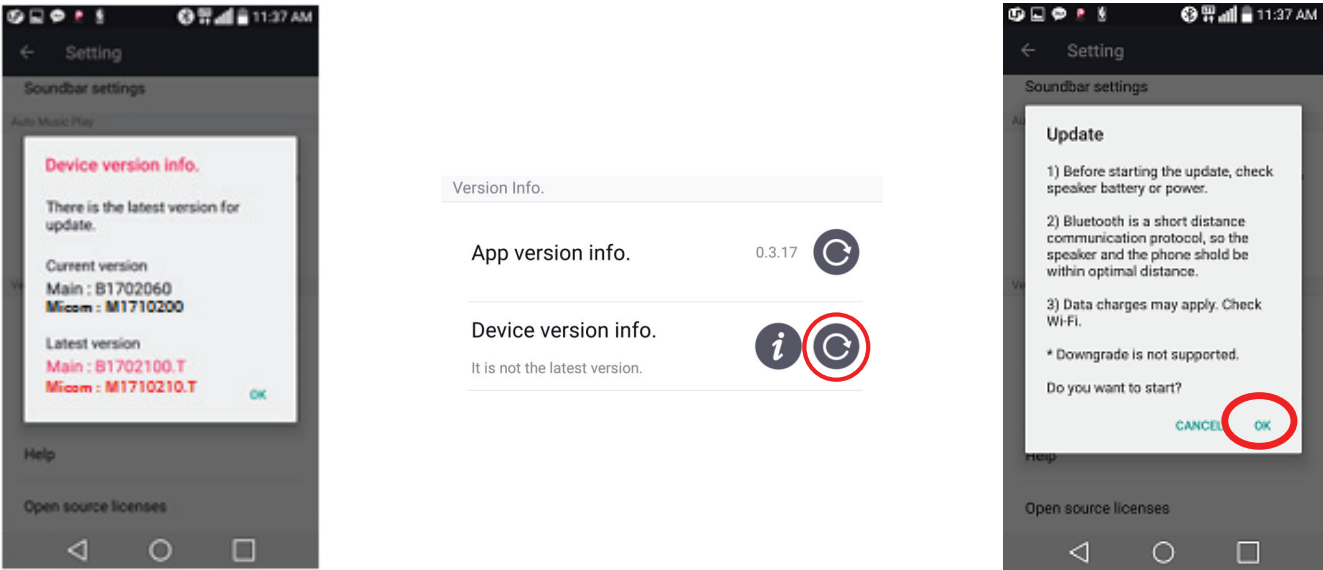


Step 6. If the main and micom version and of SN7 is already the latest version, Current version and Latest version in pop up window “Device version info.” are same. Also update icon must be disabled.



Using APP (FOTA : Firmware update Over The Air)

Step 7. If the main or micom version of SN7 is not the latest version, Current version and Latest version in pop up window “Device version info.” are different. Also update icon must be enabled. touch update icon to start FOTA update.



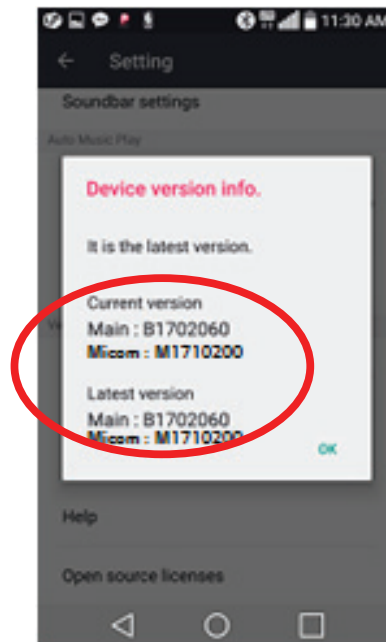
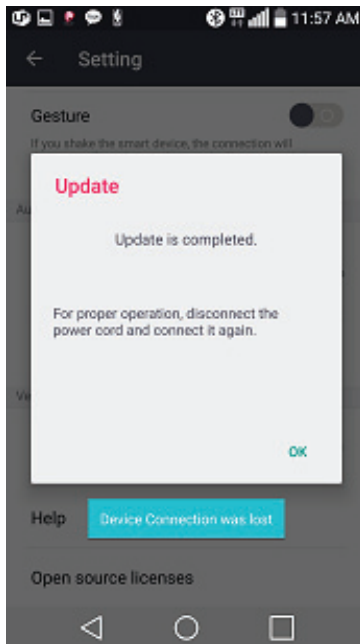
Step 8. FOTA update will be progress automatically as below sequence.

- 1) Download binary from server.
- 2) Transfer binary from Android device to SN7 main unit.
- 3) SN7 main unit executes update.

	1) Download binary	2) Transfer to SN7	3) Update progress
“Music Flow Bluetooth” App			
VFD Model	Current Function	DNLD	<div>D UPDATE</div> <div>M UPDATE</div>

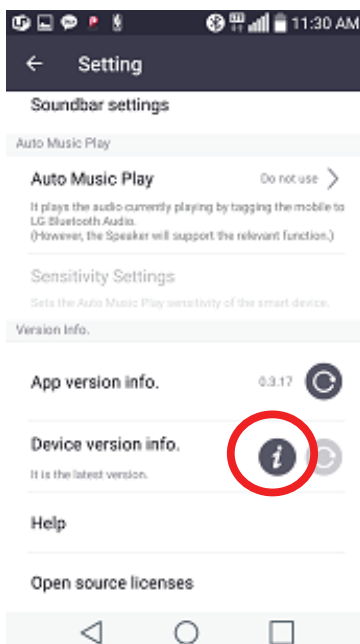
Using APP (FOTA : Firmware update Over The Air)

Step 9. SN7 main unit will be off automatically after update finish.



Step 10. Power on SN7 main unit again.

Step 11. Check the current versions to verify whether the update was successfully completed in such a way of Step 5.~ 6.



SPECIFICATIONS

• GENERAL

Power consumption
AC adapter

Refer to the main label on the unit.

Model : DA-50F25

Manufacturer : Asian Power Devices Inc.

Input : 100 - 240 V ~ 50 - 60 Hz

Output : 25 V \pm 2 A

Dimensions (W x H x D)

Approx. 890 mm x 65 mm x 119 mm

(35.1 inch x 2.6 inch x 4.7 inch)

Operating temperature

5 °C to 35 °C (41 °F to 95 °F)

Operating humidity

5 % to 90 %

Bus Power Supply (USB)

5 V \pm 500 mA

Available Digital Input Audio

Sampling Frequency

32 kHz, 44.1 kHz, 48 kHz, 88.2 kHz, 96 kHz, 176.4 kHz, 192 kHz

Available Digital Input Audio format

PCM, Dolby Atmos, Dolby Digital, Dolby TrueHD, DTS X Input from HDMI x 1 ea

• INPUT/OUTPUT

OPTICAL IN (Digital audio in)

3 V (p-p), Optical jack x 1

HDMI IN

19 Pin (Type A, HDMI™ connector) x 1

HDMI OUT

19 Pin (Type A, HDMI™ connector) x 1

• AMPLIFIER (RMS Output)

Total

160 W RMS

Front

30 W RMS x 2 (4 Ω at 1 kHz, THD 10 %)

Center

30 W RMS (4 Ω at 1 kHz, THD 10 %)

Top

35 W RMS x 2 (4 Ω at 1 kHz, THD 10 %)

Subwoofer

220 W RMS (3 Ω at 1 kHz, THD 10 %)

• WIRELESS SUBWOOFER

Power requirements

Refer to the main label on the wireless subwoofer.

Power consumption

Refer to the main label on the wireless subwoofer.

Type

1 Way 1 Speaker

Impedance

3 Ω

Rated Input Power

220 W RMS

Max. Input Power

440 W RMS

Dimensions (W x H x D)

Approx. 180 mm x 394 mm x 290 mm

(7.1 inch x 15.6 inch x 11.5 inch)

SPK8-S (SPK8-S, S78S1-S), Sold Separately

• WIRELESS RECEIVER

Power requirements

Refer to the main label on the wireless receiver.

Power consumption

Refer to the main label on the wireless receiver.

Rear

70 W RMS x 2 (3 Ω at 1 kHz, THD 10 %)

Dimensions (W x H x D)

Approx. 60 mm x 220 mm x 175 mm

(2.4 inch x 8.7 inch x 6.9 inch)

• REAR SPEAKERS (Each)

Type

1 Way 1 Speaker

Impedance

3 Ω

Rated Input Power

70 W RMS

Max. Input Power

140 W RMS

Dimensions (W x H x D)

Approx. 100.0 mm x 140.0 mm x 100.0 mm

(3.9 inch x 5.5 inch x 3.9 inch)

- Designs and specifications are subject to change without prior notice.

SECTION 2

CABINET & MAIN CHASSIS

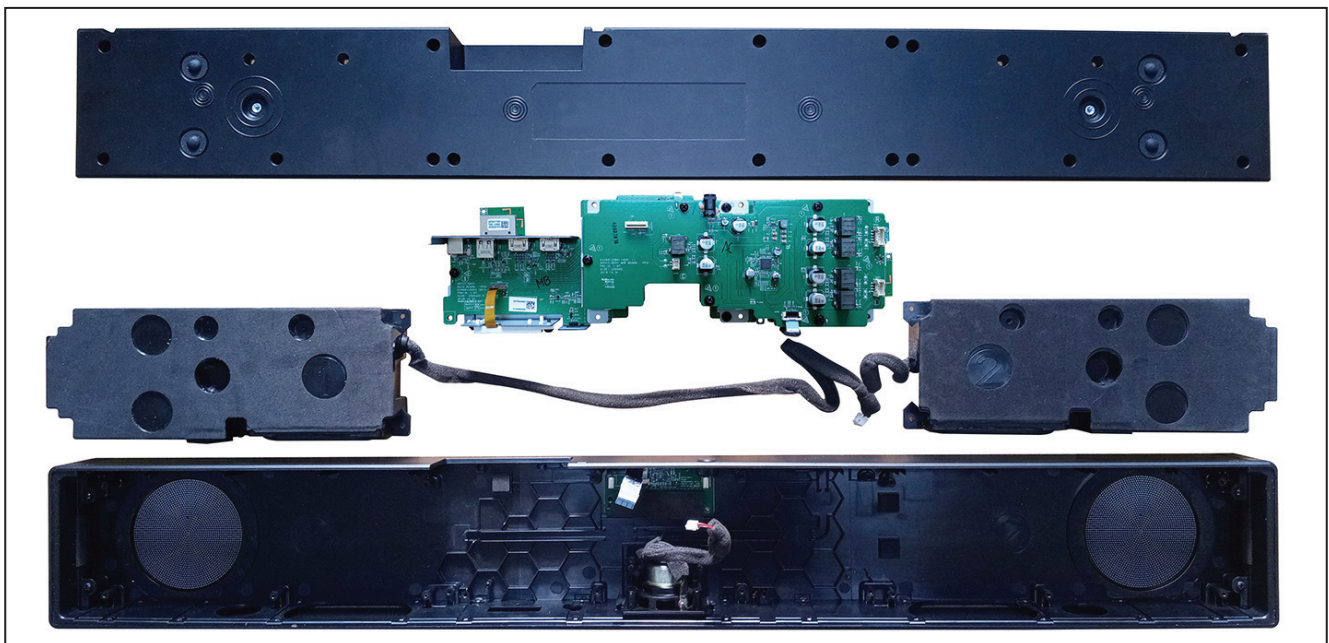
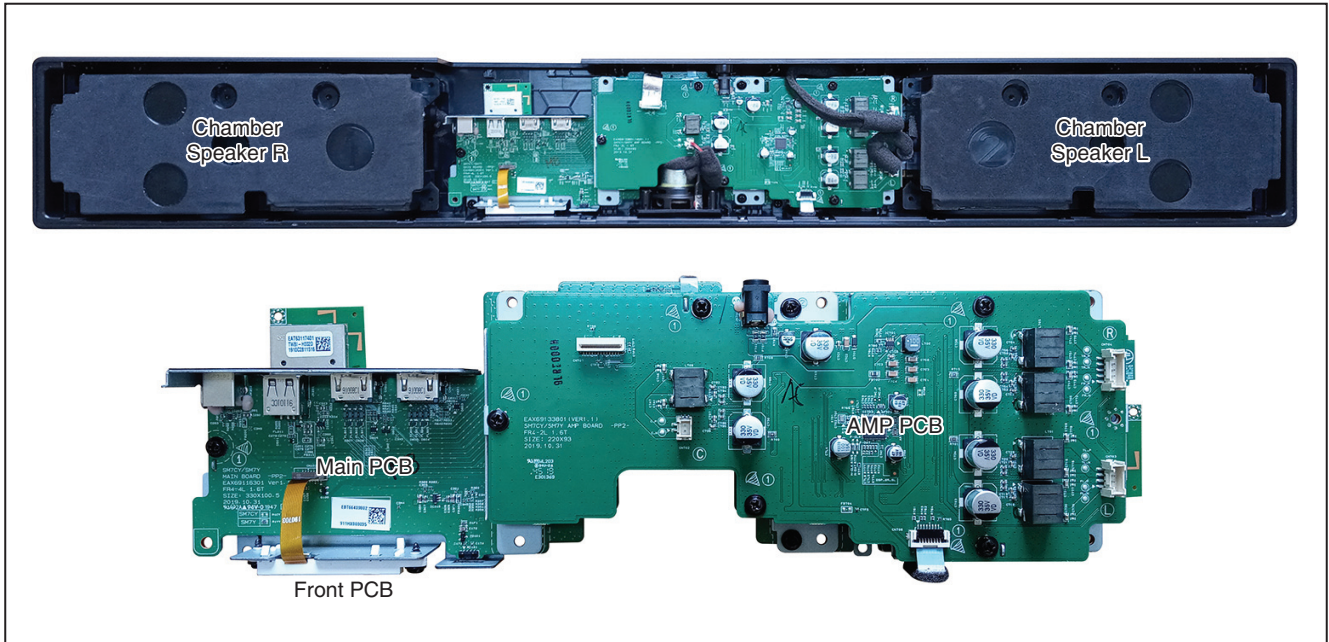
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DISASSEMBLY INSTRUCTIONS

1. HOW TO DISASSEMBLE THE MAIN UNIT

1-1. Disassemble Main set

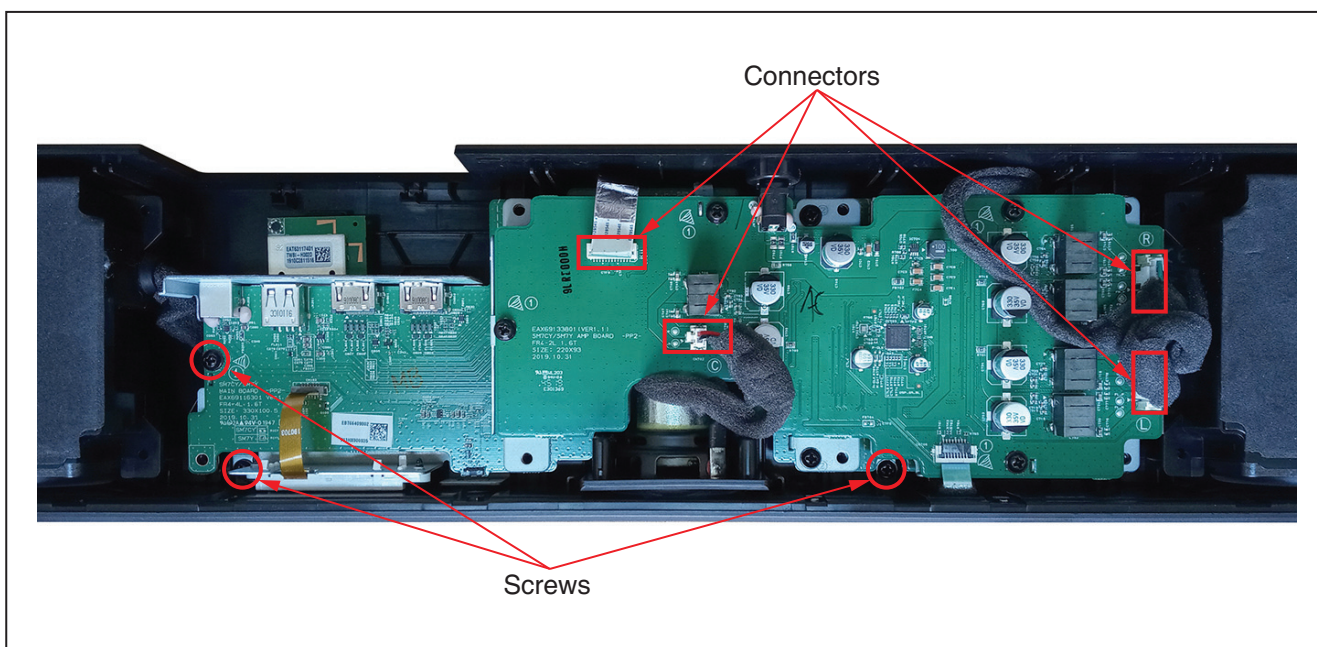


HOW TO DISASSEMBLE THE MAIN UNIT

Disassemble Main set



- 1) Remove the 21 screws(1SZZR-0097X) in the direction of the figure.

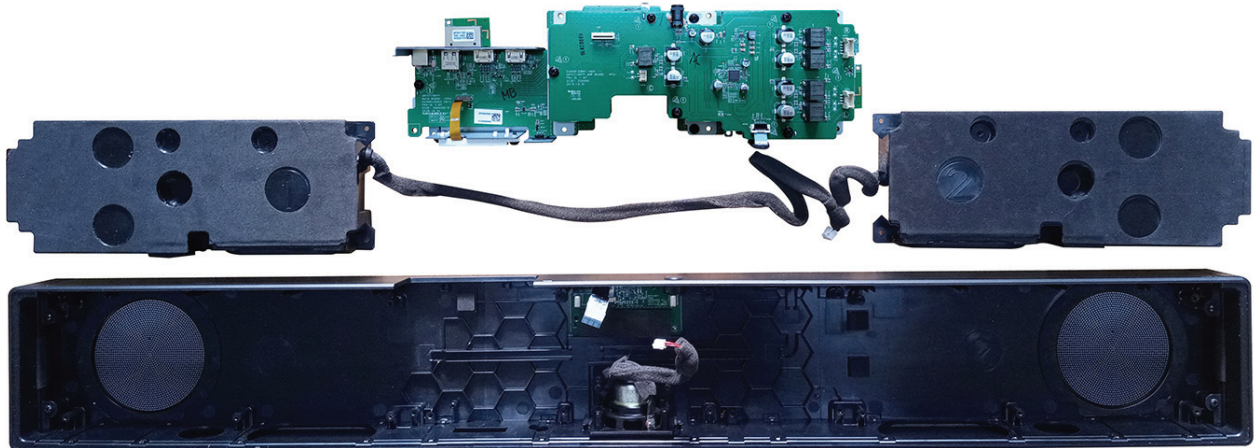


- 1) Remove the 4 connectors.
- 2) Remove the 3 screws(1SSZR-0098H) in the direction of the figure.

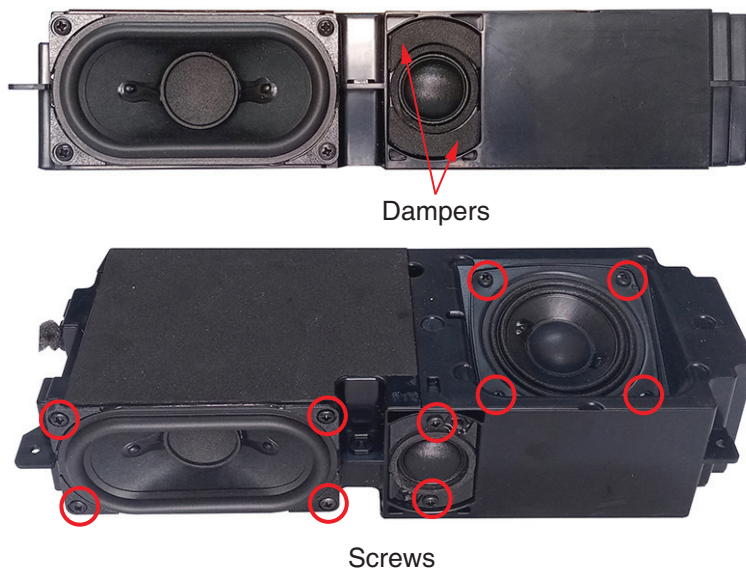
HOW TO DISASSEMBLE THE MAIN UNIT

Disassemble Main set

[Total disassembly]



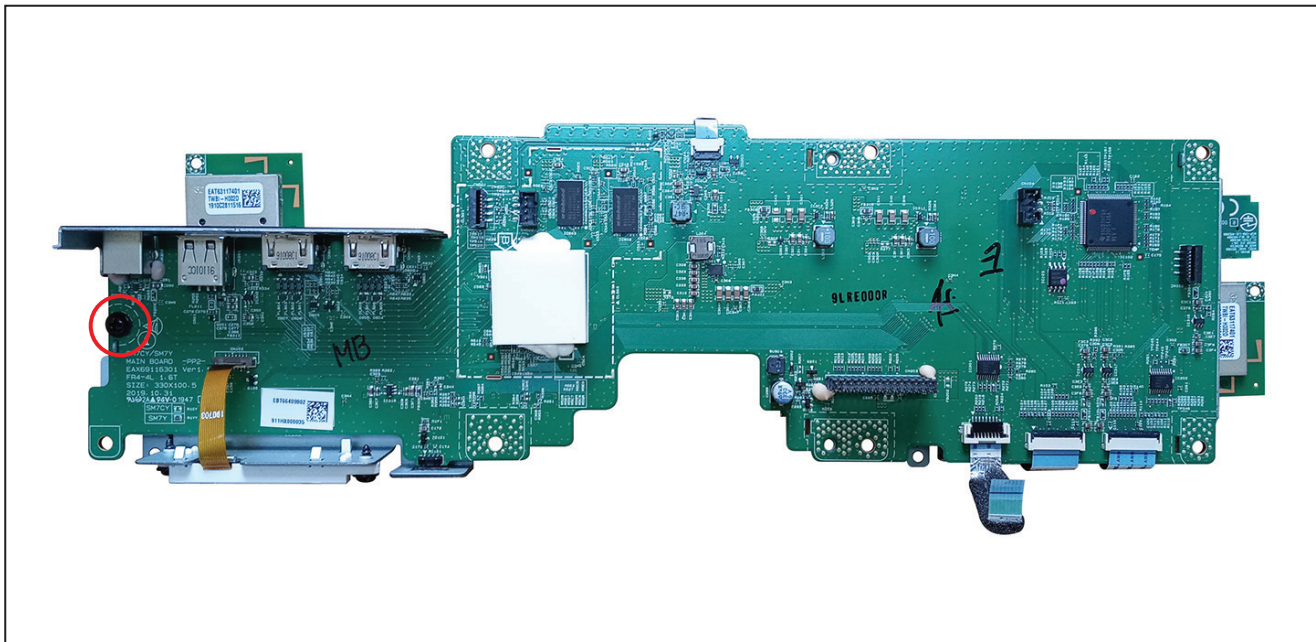
[Chamber]



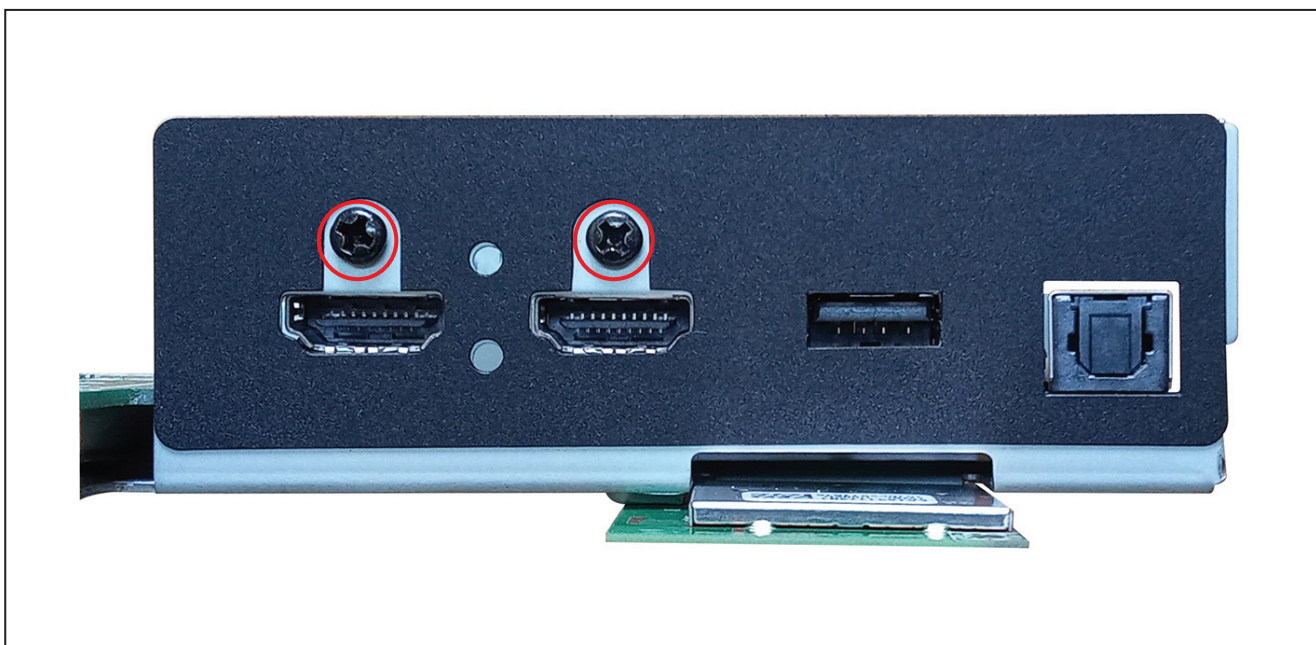
- 1) Remove the 2 dampers.
- 2) Remove the 10 screws(1SZZR-0097X) in the direction of the figure.

HOW TO DISASSEMBLE THE MAIN UNIT

Disassemble Main set



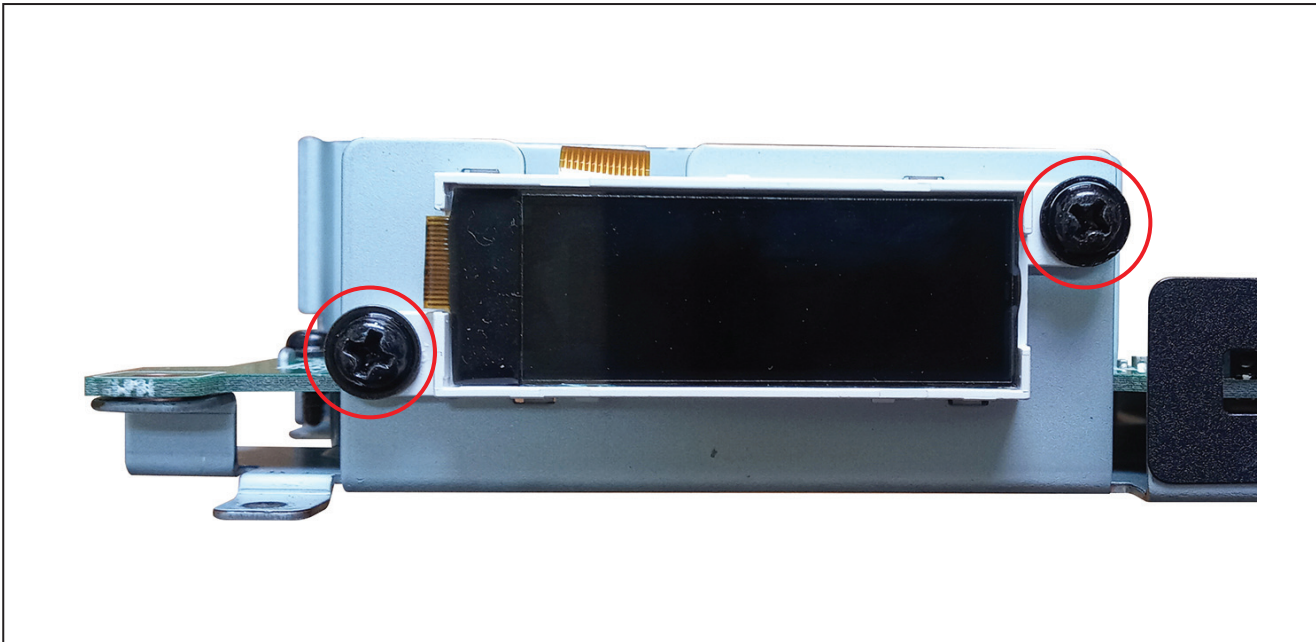
- 1) Remove the 1 screw(1SSZR-0098H).



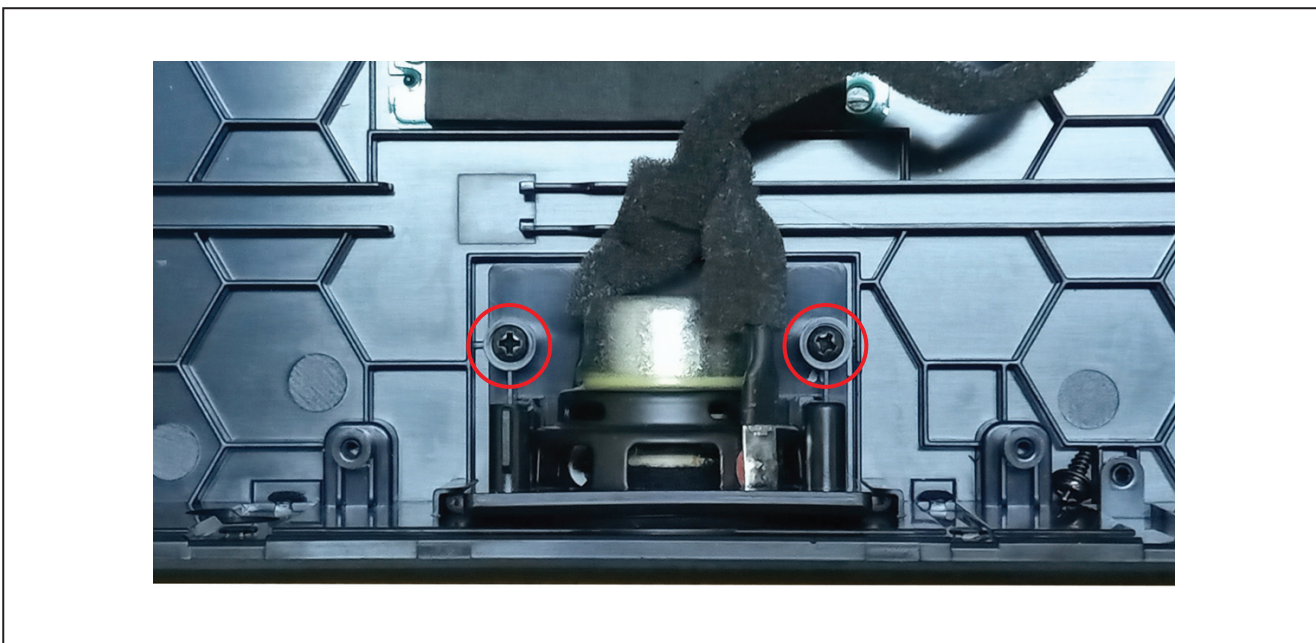
- 1) Disassemble Main PCB
(Disassemble screws(353-022S) - 2 point red mark)

HOW TO DISASSEMBLE THE MAIN UNIT

LCD Module Assembly



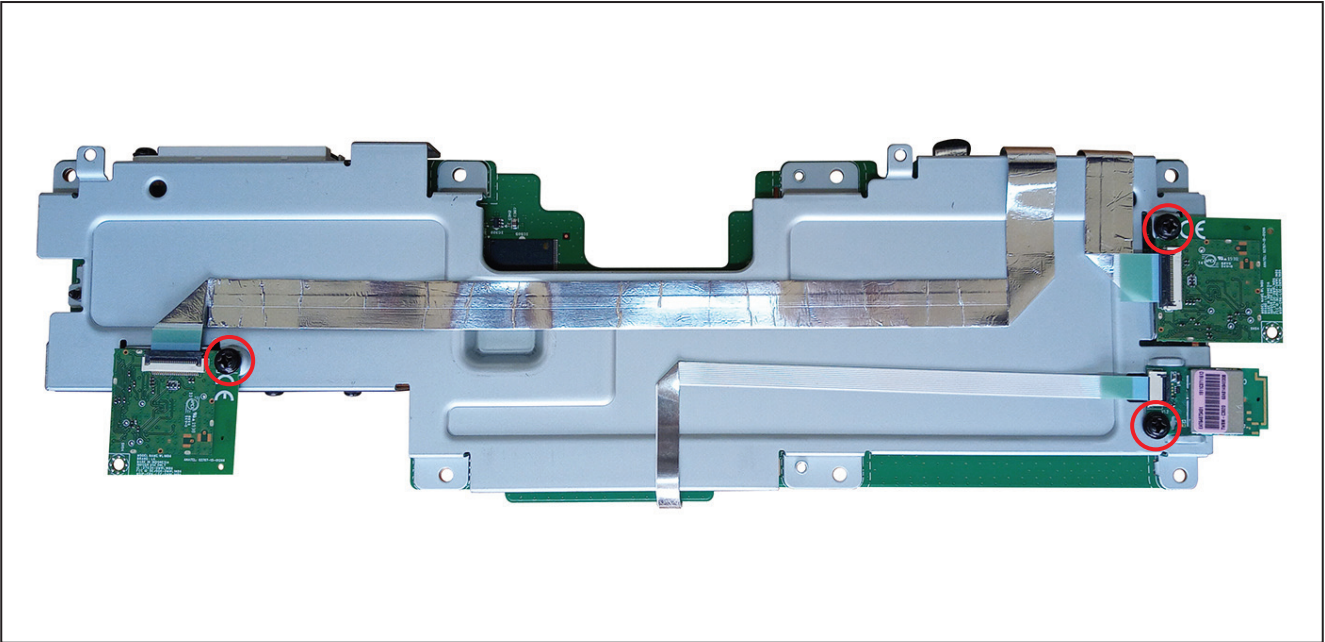
- 1) Disconnect the cable from the LCD module assembly.
- 2) Remove the 2 screws(1SSZR-0098H).



- 1) Remove the 2 screws(1SSZR-0098H).

HOW TO DISASSEMBLE THE MAIN UNIT

Disassemble Main set



- 1) Disassemble red point 3 screws(1SSZR-0098H).

2. HOW TO DISASSEMBLE THE SUBWOOFER

2-1. Rear Panel Assembly

1) Remove the 8 screws.

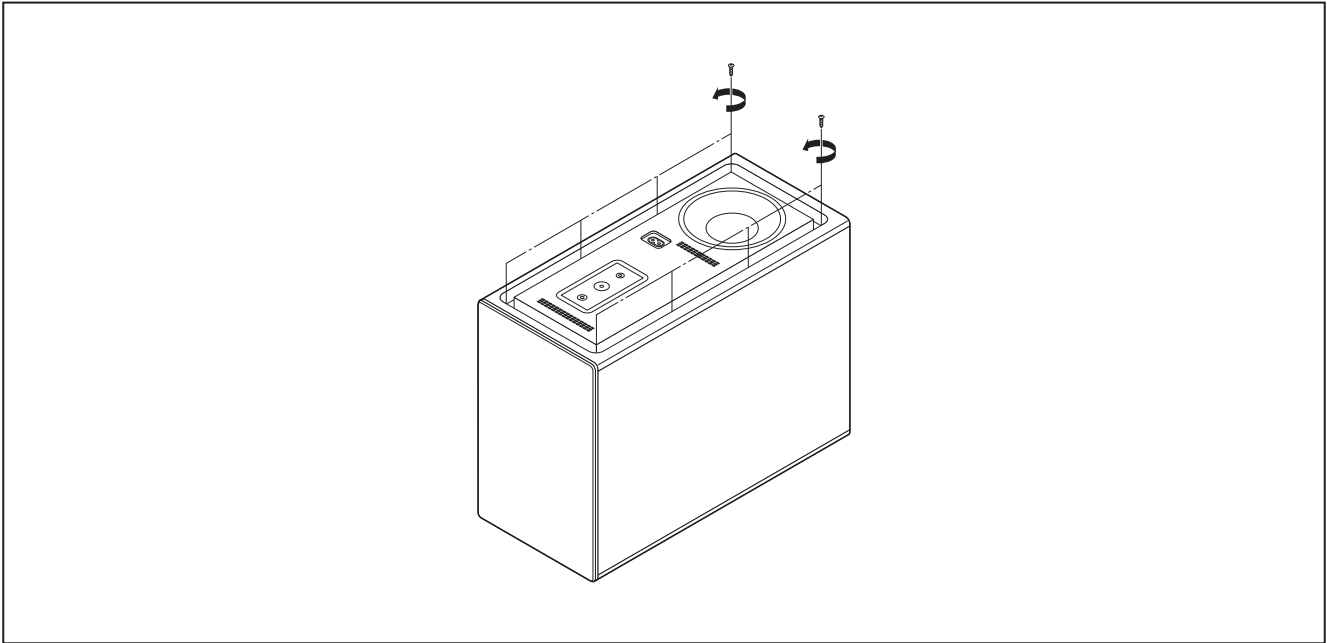


Figure 2-1 (1)

2) Pull out the Rear Panel Assembly and disconnect the SPK cable.

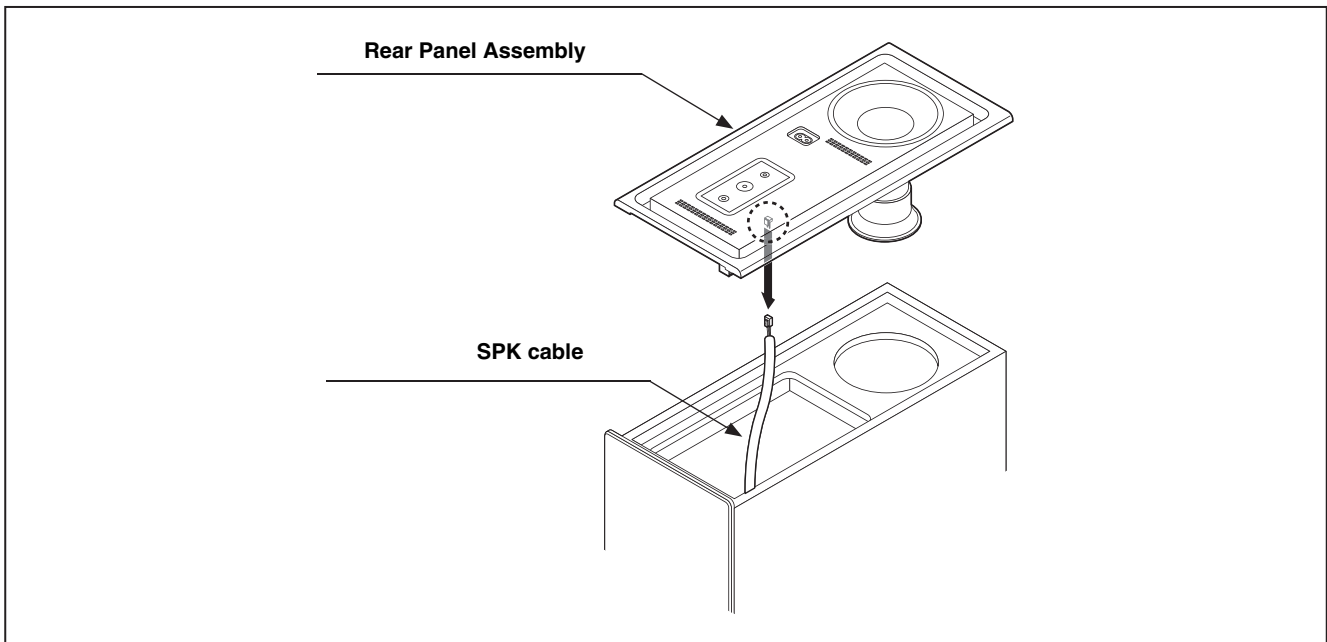


Figure 2-1 (2)

HOW TO DISASSEMBLE THE SUBWOOFER

2-2. WIRELESS Module

- 1) Disconnect the FFC cable.
- 2) Remove the EVA sheet (0.15T) covered the WIRELESS module.

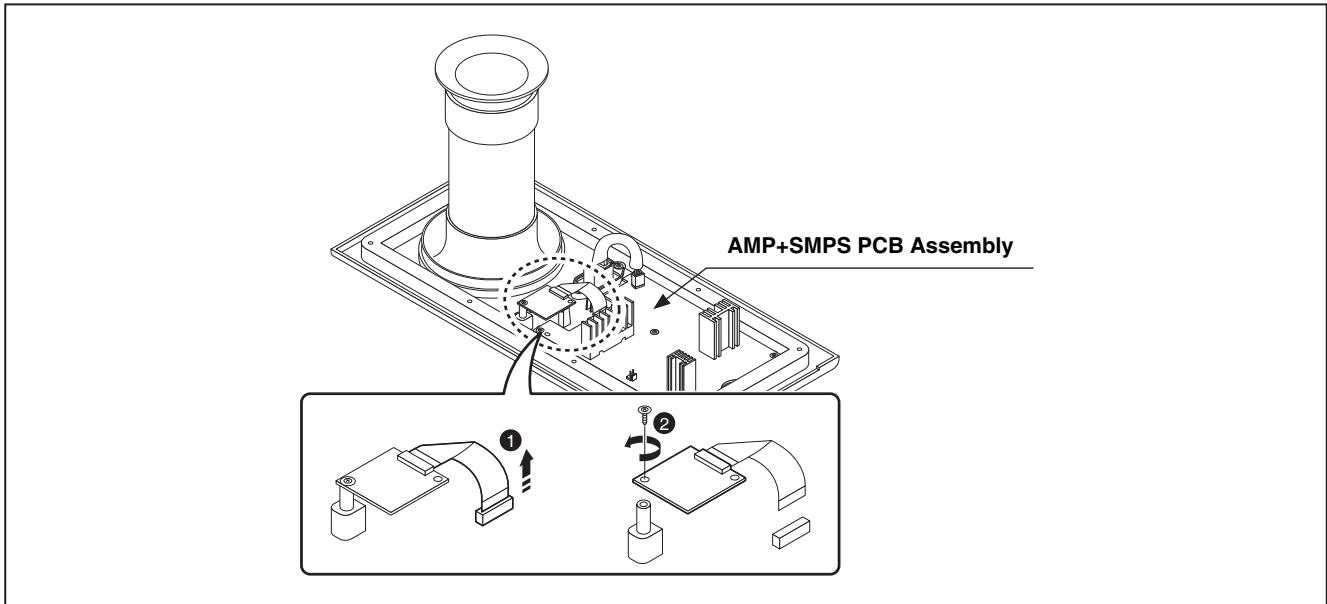


Figure 2-2 (1)

⚠ Caution when assembling the WIRELESS Module

- 1) Attach the EVA gaskets (1.0T) to both sides of the WIRELESS module.
- 2) Assemble the WIRELESS module into the wireless holder.

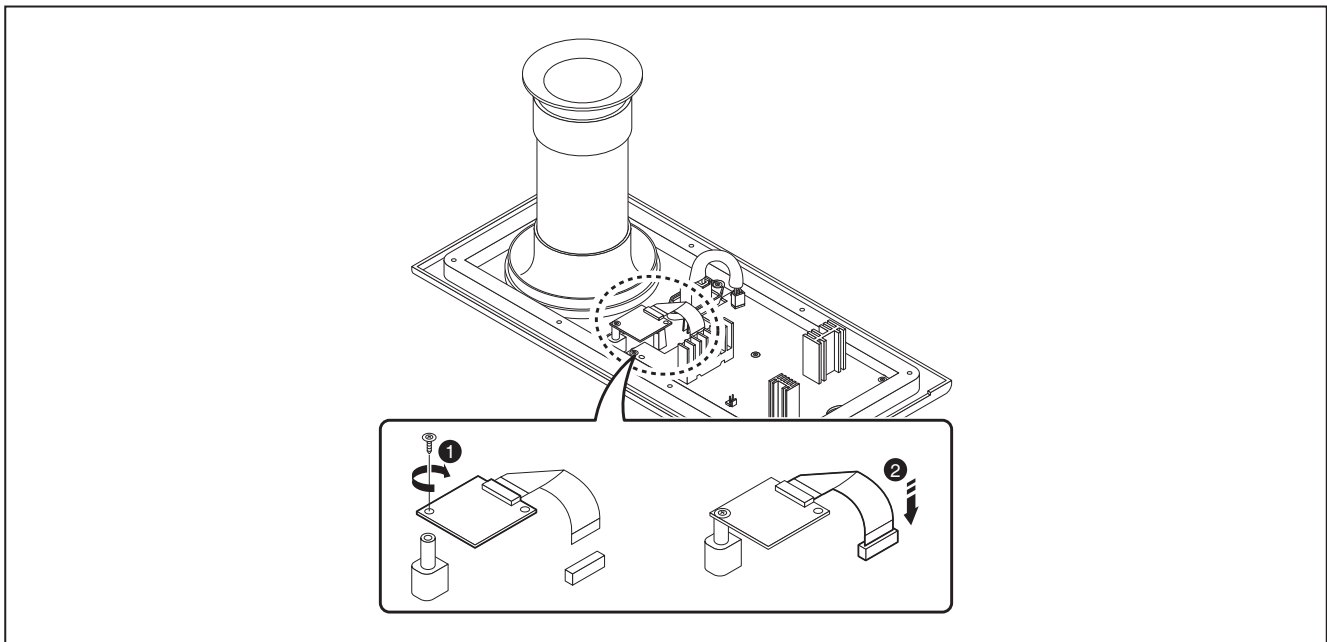


Figure 2-2 (2)

HOW TO DISASSEMBLE THE SUBWOOFER

2-3. AMP+SMPS PCB Assembly

- 1) Disconnect the Power inlet socket cable.

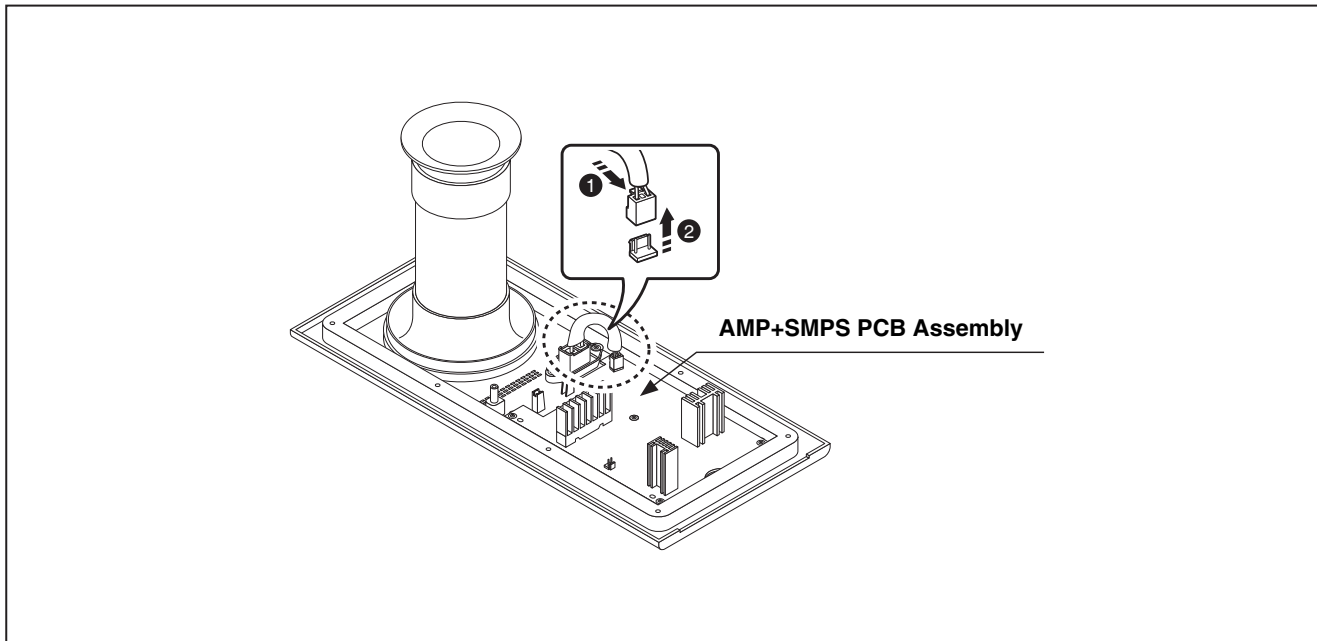


Figure 2-3 (1)

- 2) Remove the 5 screws.
- 3) Remove the AMP+SMPS PCB Assembly.

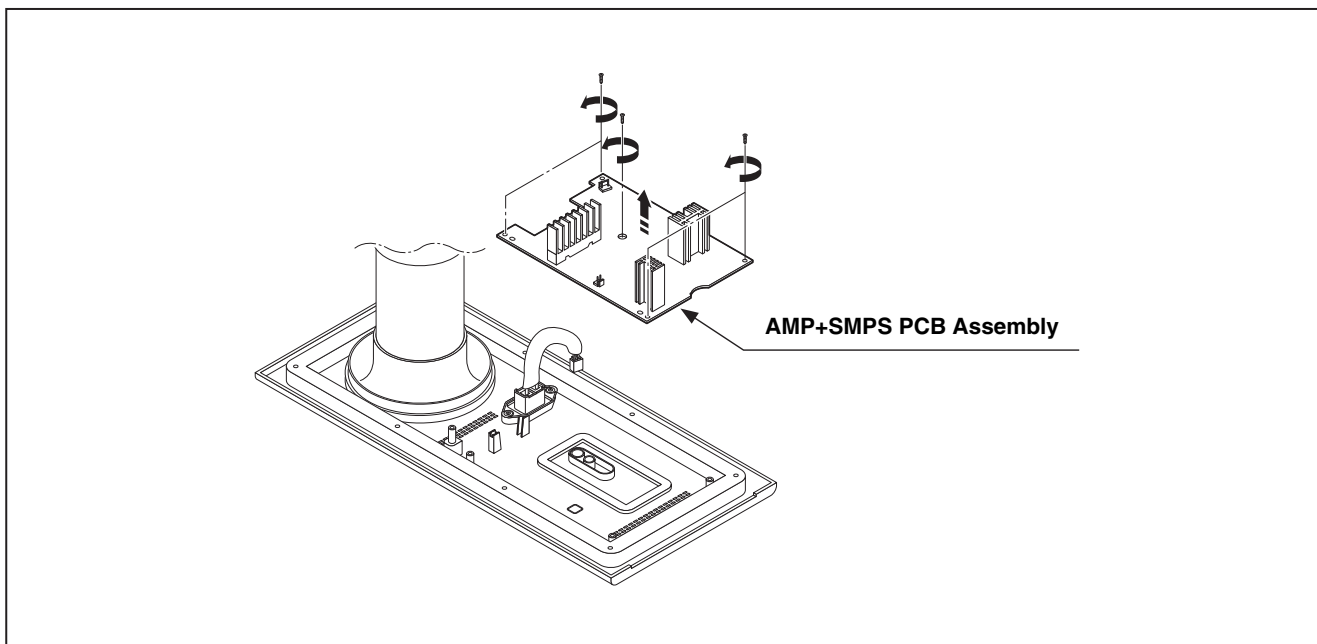
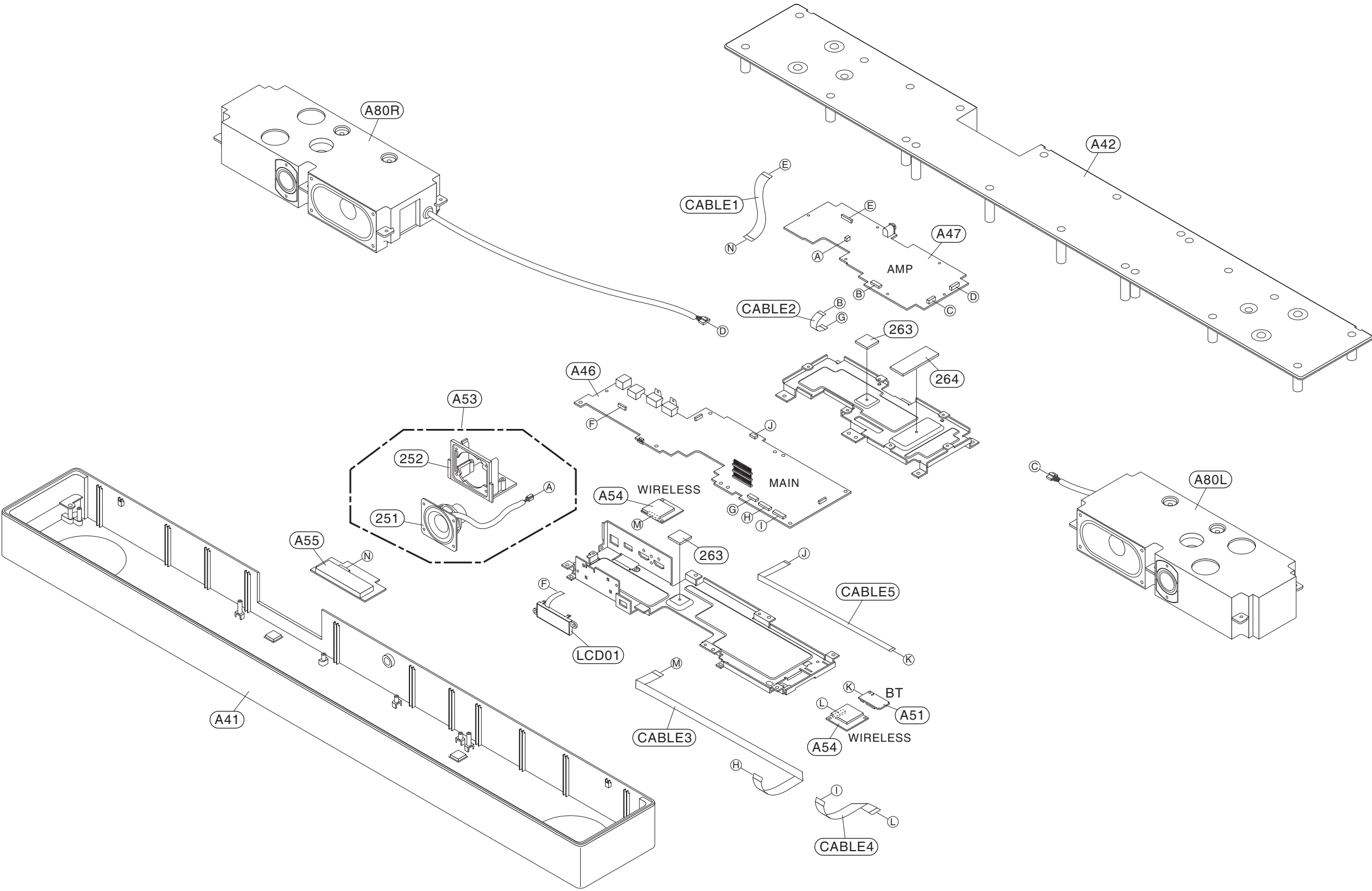


Figure 2-3 (2)

EXPLODED VIEWS

1. MAIN UNIT (SN7Y) SECTION



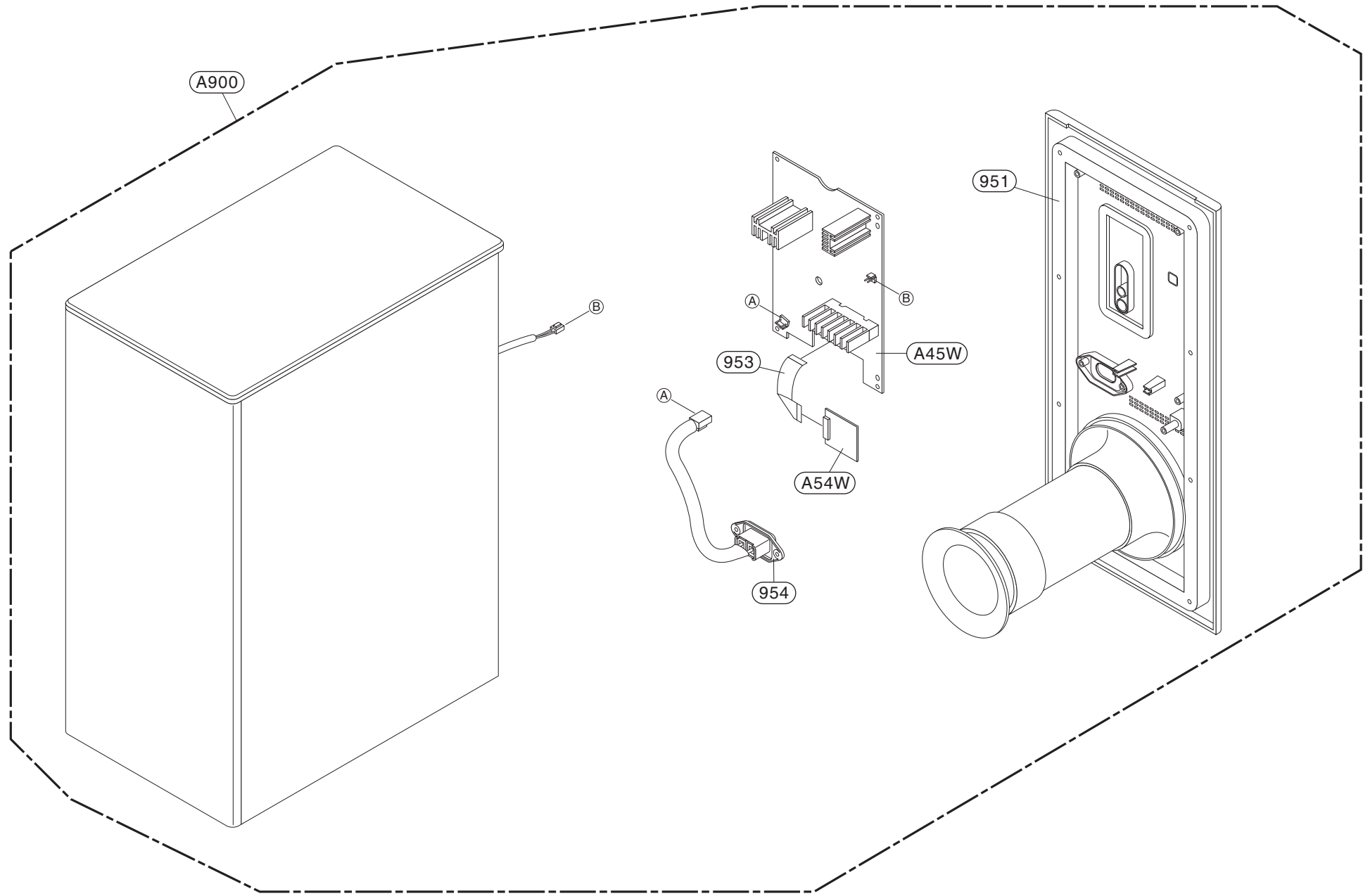
MEMO

- **Main unit parts list**

S	AL	LOCA. NO.	PART NO.	DESCRIPTION	SPECIFICATION	REMARKS
ASSEMBLY PARTS						
		A41	ABQ30000402	Case Assembly	SN7Y Case Top Assy	
		A42	ABQ30000103	Case Assembly	SN7CY Case Bottom Assy	
		A46	EBT66409812	LFS Total PCB Assembly	00551A434200 00000000 534E3759	
		A47	EBT66438101	LFS Total PCB Assembly	SN7CY AMP_LFS_BPR -	
		A51	EAT64073401	Module,Bluetooth	TWBM-C302D WB2NB8 CSR8510 HCI.	
		A53	AEJ76299301	Holder Assembly	HOME THEATER SM7CY Holder Cent	
		A54	EAT63117401	Module,RF Full Module(RxTx)	WL1NB6(TWBI-H002D) 0DBM 0DB 0%	
	OR	A54	EAT63117404	Module,RF Full Module(RxTx)	WL1NB6_ 0DBM 0DB 0% 0A 0A 0DB	
		A55	EBR30006101	PCB Assembly	SN7CY TOUCH_PCB Total Assy -	
		A80L	ABQ30000204	Case Assembly	SN7Y Chamber Left W/O PASSIVE	
		A80R	ABQ30000304	Case Assembly	SN7Y Chamber Right W/O Passive	
INDIVIDUAL PARTS						
		251	EAB65148205	Speaker,Woofer	SN7 Center 2inch Woofer U0561L	
		252	MEG66460801	Holder	MOLD ABS HOME THEATER SM7CY MO	
		263	MCQ62096433	Damper	CUTTING THERMOPLASTIC DVD NB45	
		264	MCQ62096489	Damper	CUTTING THERMOPLASTIC HOME THE	
		LCD01	EAJ63172305	LCD Module	SMMD3276-A-00-VTNF-WX BACK LIG	
CABLES						
		CABLE1	EAD62131544	Cable,FFC	26P050D-H01-0F01A-T 100 100MM	
		CABLE2	EAD61049032	Cable,FFC	8P100D-H01-0F01AS-T 50 50MM 1.	
		CABLE3	EAD63970525	Cable,FFC	26P050C-H01-2F01A-T 320-25-225	
		CABLE4	EAD62131543	Cable,FFC	26P050D-H01-1F01A-T 70-25-45 7	
		CABLE5	EAD62185625	Cable,FFC	12P050D-H01-1F01A-T 190-140-50	

[illegible]

2. WIRELESS SUBWOOFER (SPN5B-W) SECTION



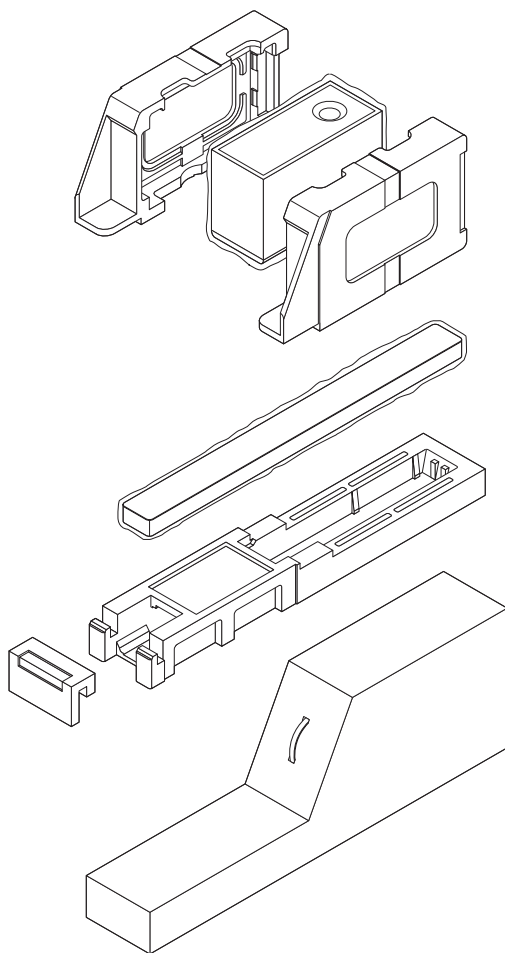
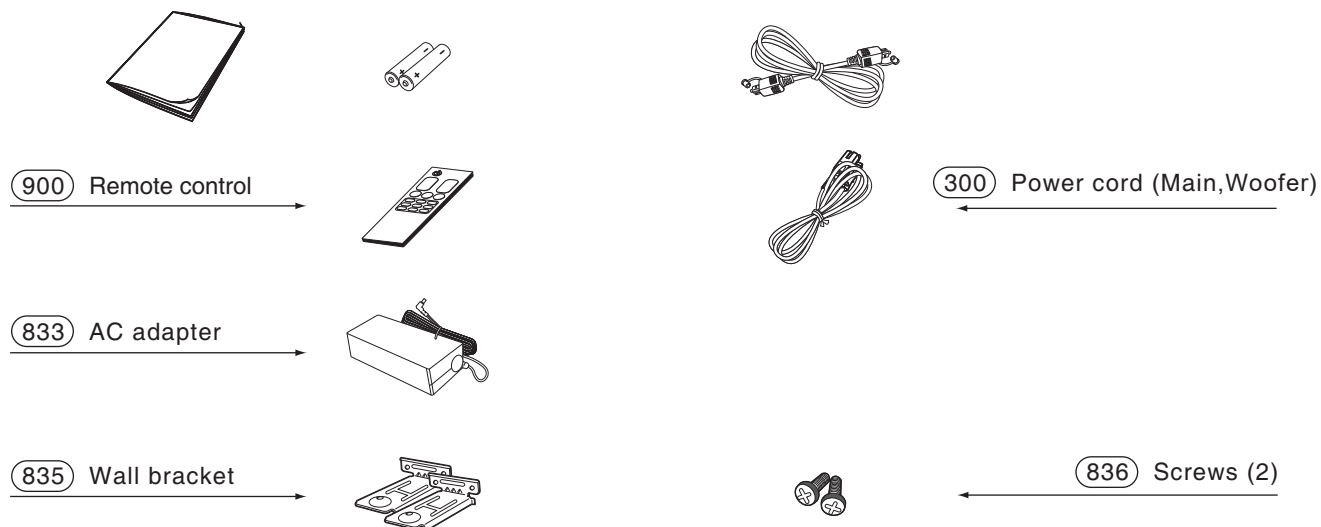
MEMO

- **Wireless subwoofer parts list**

S	AL	LOCA. NO.	PART NO.	DESCRIPTION	SPECIFICATION	REMARKS
		A900	TCG37548106	Active Woofer	SPN5B-W_EU BLACK COLOR_SN5Y.DE	
		A45W	EBR89625801	PCB Assembly	SPN8-W/SPN5B-W Woofer AMP+SMPS	
		A54W	EAT63117401	Module,RF Full Module(RxTx)	WL1NB6(TWBI-H002D) 0DBM 0DB 0%	
	OR	A54W	EAT63117404	Module,RF Full Module(RxTx)	WL1NB6_ 0DBM 0DB 0% 0A 0A 0DB	
		951	AGL30012602	Panel Assembly,Rear	SPN5B-W SN5Y Panel Rear Assy	
		953	EAD62131539	Cable,FFC	26P050D-H01-1F01A-N 60-22-38 6	
		954	EAG63233208	Socket,Power	DAC-18JN08 2P STRAIGHT WIRE BK	

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

3. PACKING ACCESSORY SECTION



• **Packing accessory parts list**

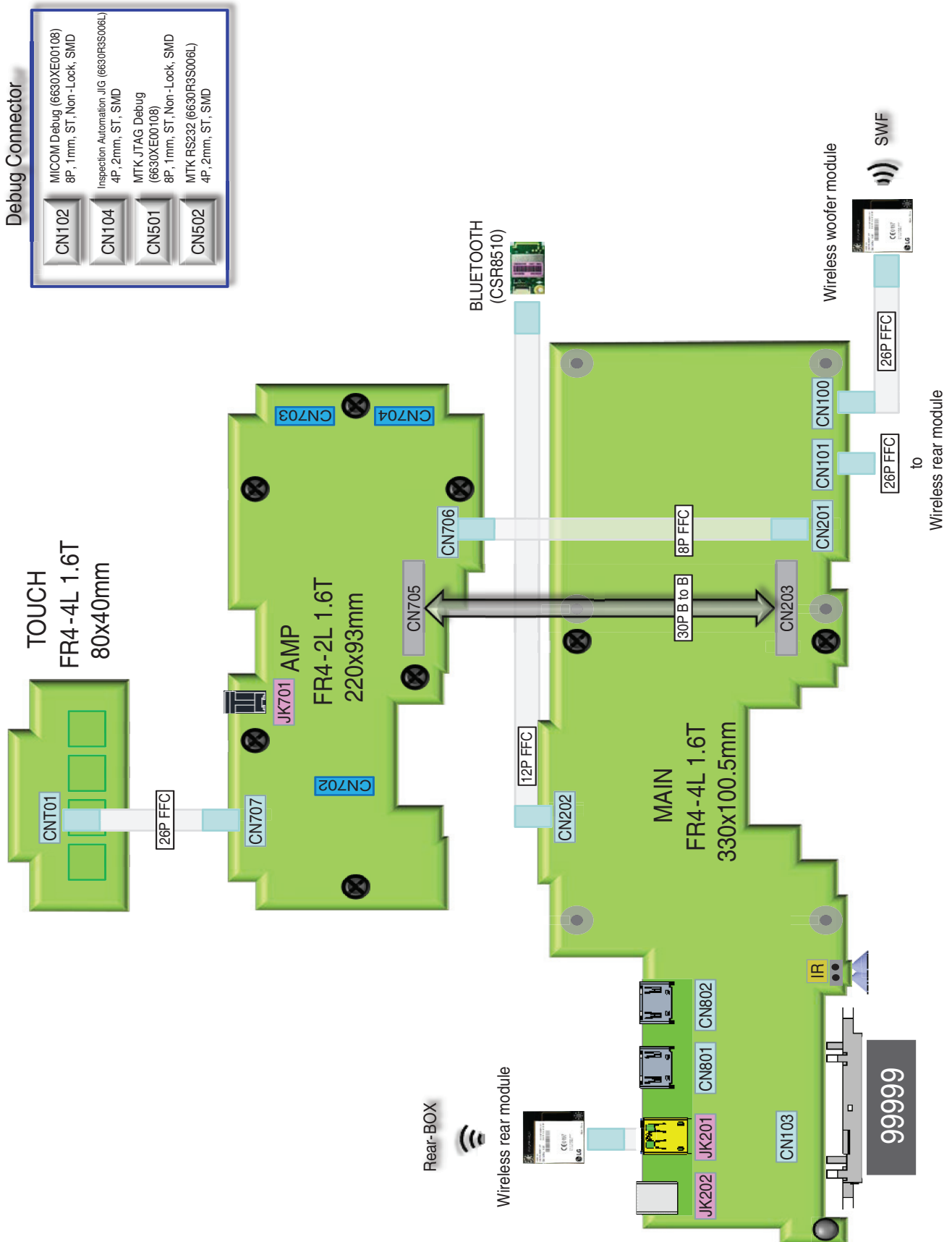
S	AL	LOCA. NO.	PART NO.	DESCRIPTION	SPECIFICATION	REMARKS
△		300	EAD61891101	Power Cord	DE-2P-A-N-P-S-1550-N-00-BK-GBR	
		833	EAY62909702	Adapters	DA-50F25-AAAA 100~240Vac 25Vdc	
		835	AAA77508401	Accessory Assembly	SPK SK9Y/SK10Y Wallmount Brack	
		836	AGG75620751	Packing Assembly	LAS550H silver new screw + bag	
		900	AKB75595331	Remote Controller Assembly	MA6 SM/SL10/9/8/7/6/5/4 Soundb	

SECTION 3 ELECTRICAL

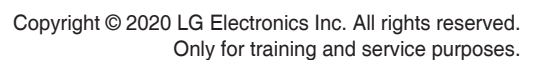
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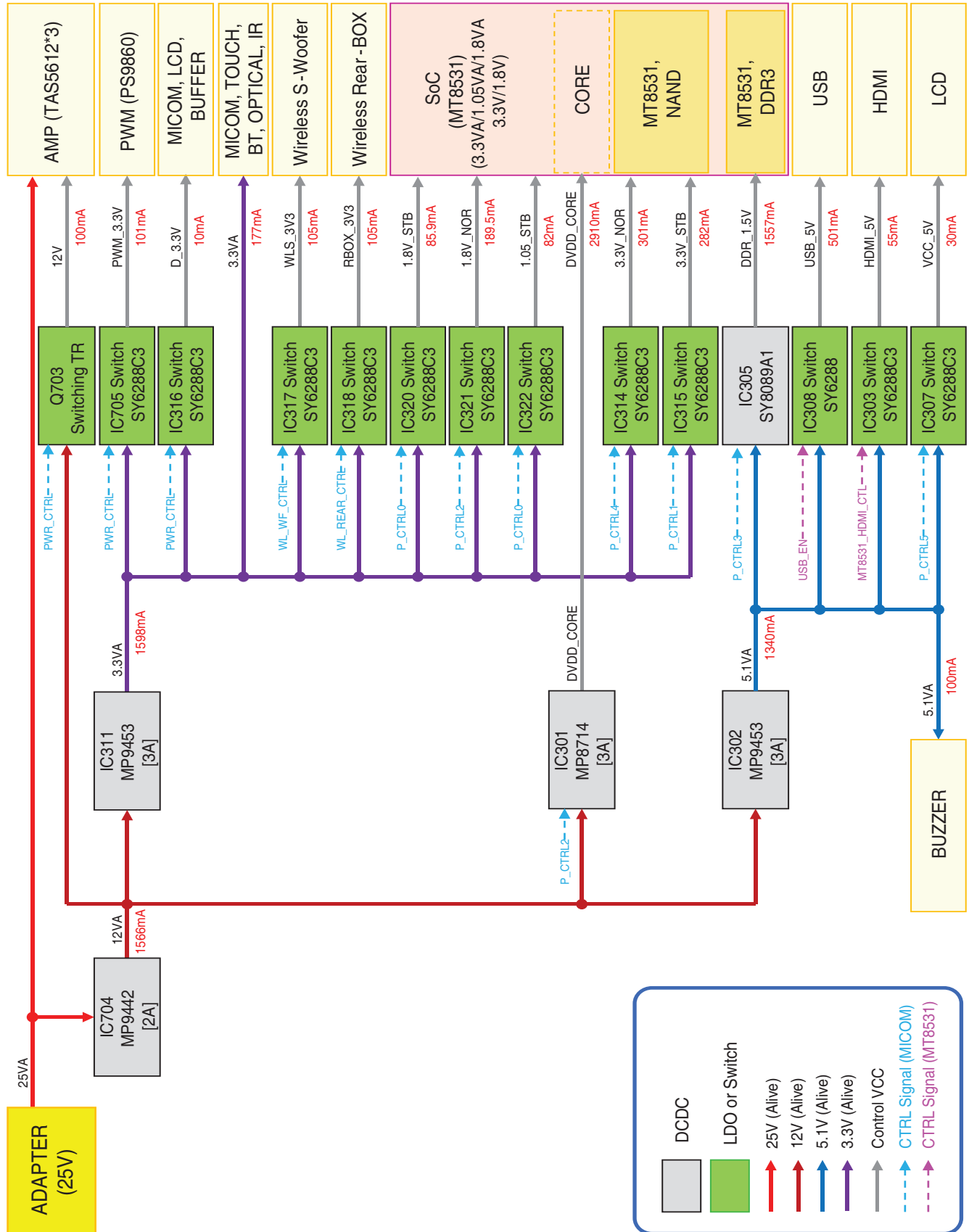
WIRING DIAGRAM



1. SYSTEM BLOCK DIAGRAM



2. POWER BLOCK DIAGRAM



ONE POINT REPAIR GUIDE

1. NO BOOTING WHEN YOU TURN THE UNIT ON, NO MESSAGE OR “HELLO” ON FRONT PANEL

When you turn on your set, no message on the front panel.

1-1. IC704 System 12 VA in AMP Board (No 12 VA)

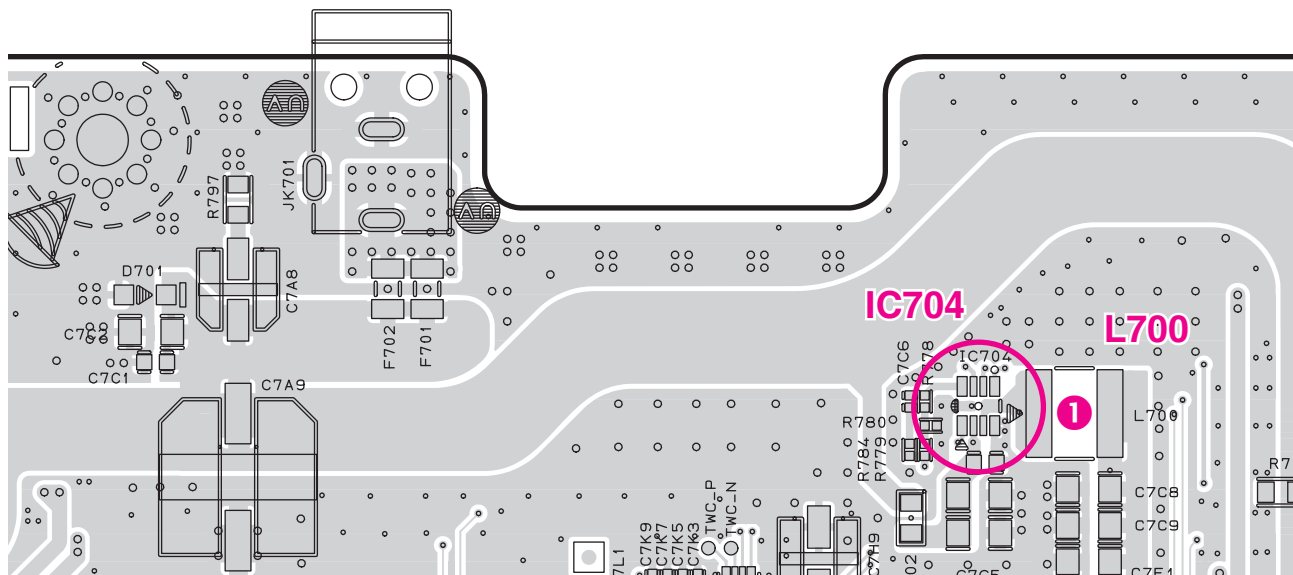
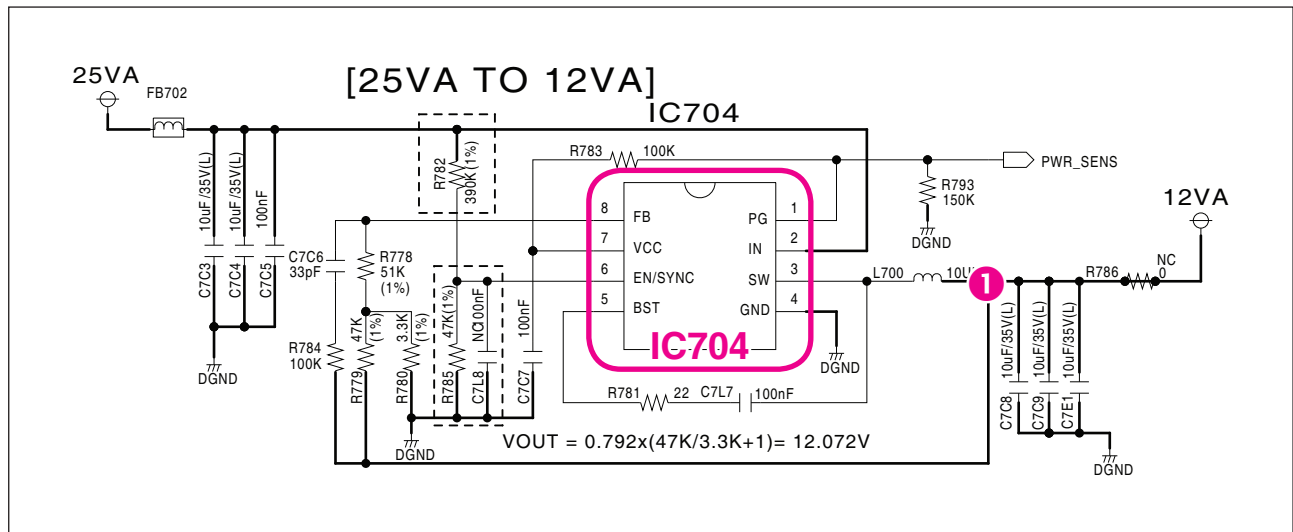
1-1-1. Solution

Replace AMP board.

1-1-2. How to troubleshoot (Countermeasure)

- 1) Please check 25 VA of IC704 pin2 (VIN).
- 2) If 25 VA is abnormal, please check ac adapter.
- 3) If 25 VA is OK, but 12 VA is abnormal at pin3 L700 of IC704 (VOUT), IC704 block has problem.

1-1-3. Service hint (Any picture / Remark)



< AMP board top view >

ONE POINT REPAIR GUIDE

NO BOOTING WHEN YOU TURN THE UNIT ON, NO MESSAGE OR “HELLO” ON FRONT PANEL

When you turn on your set, it will blank / no message on front panel / doesn't work.

1-2. IC302 System 5 V in Main Board (No 5.1 VA)

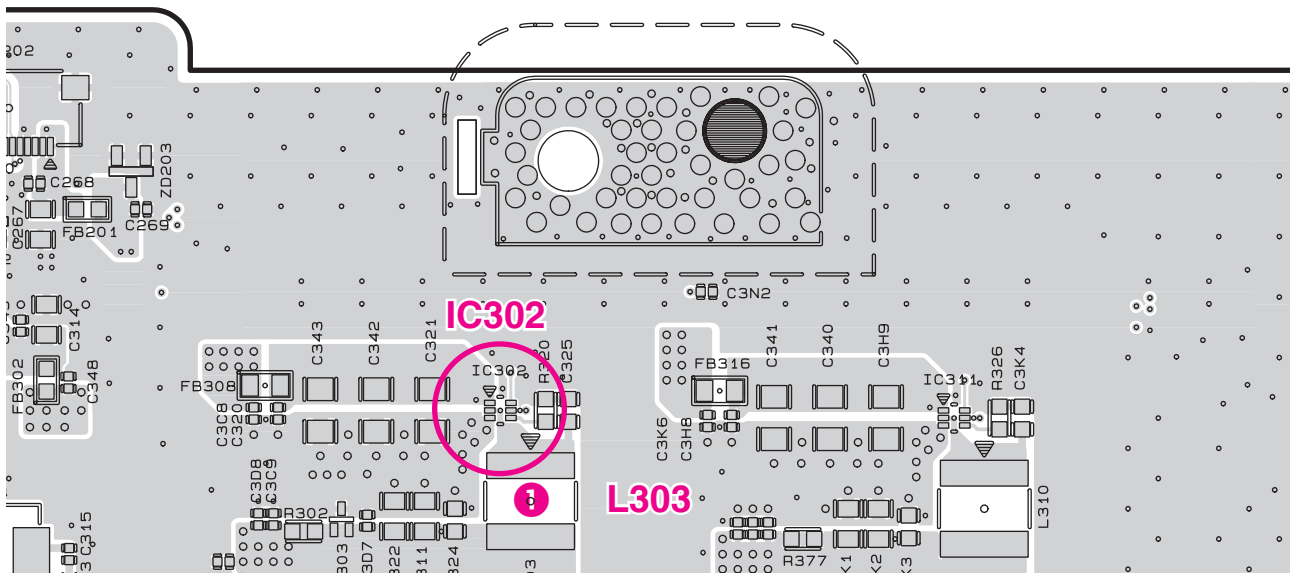
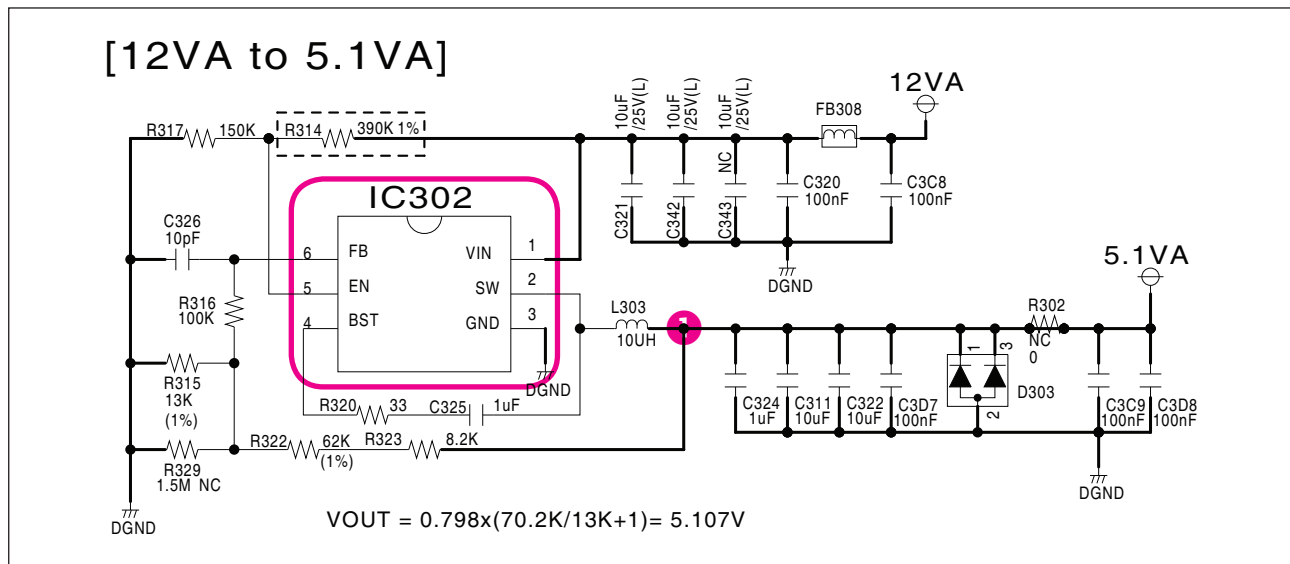
1-2-1. Solution

Replace MAIN board.

1-2-2. How to troubleshoot (Countermeasure)

- 1) Please check 5.1 VA of IC302 pin2 L303.
- 2) If 12 VA is OK, but 5.1 VA is abnormal at pin2 L303 of IC302 (VOUT), IC302 block has problem.

1-2-3. Service hint (Any picture / Remark)



< MAIN board top view >

ONE POINT REPAIR GUIDE

NO BOOTING WHEN YOU TURN THE UNIT ON, NO MESSAGE OR “HELLO” ON FRONT PANEL

When you turn on your set, it will blank / no message on front panel / doesn't work.

1-3. IC311 System 3.3 V in Main Board (No 3.3 VA)

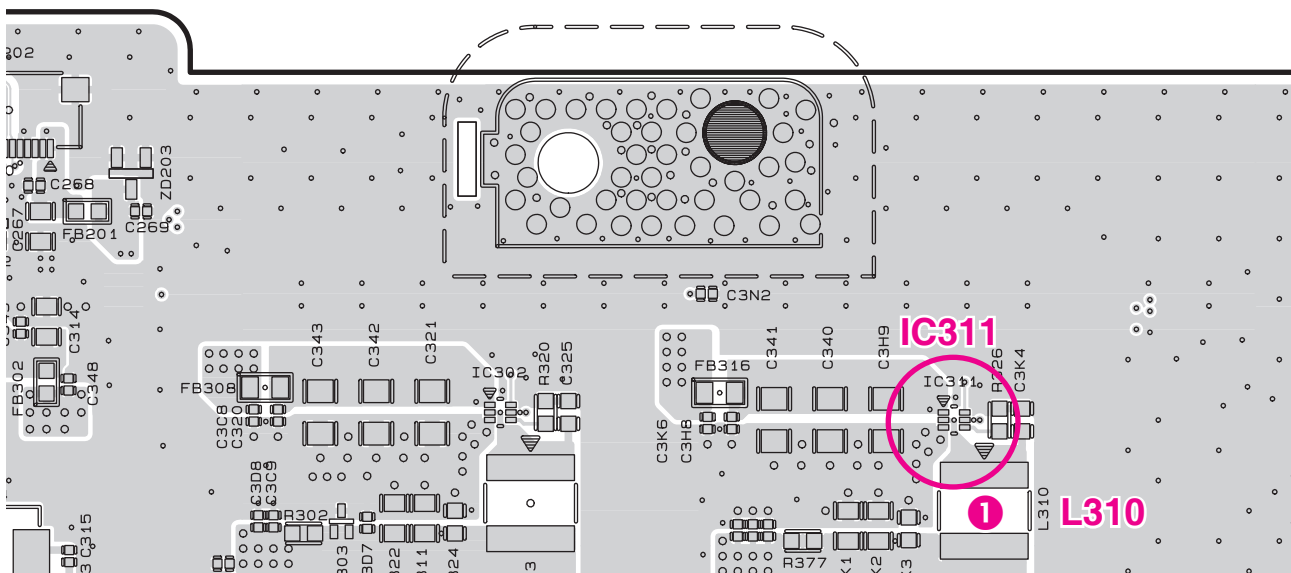
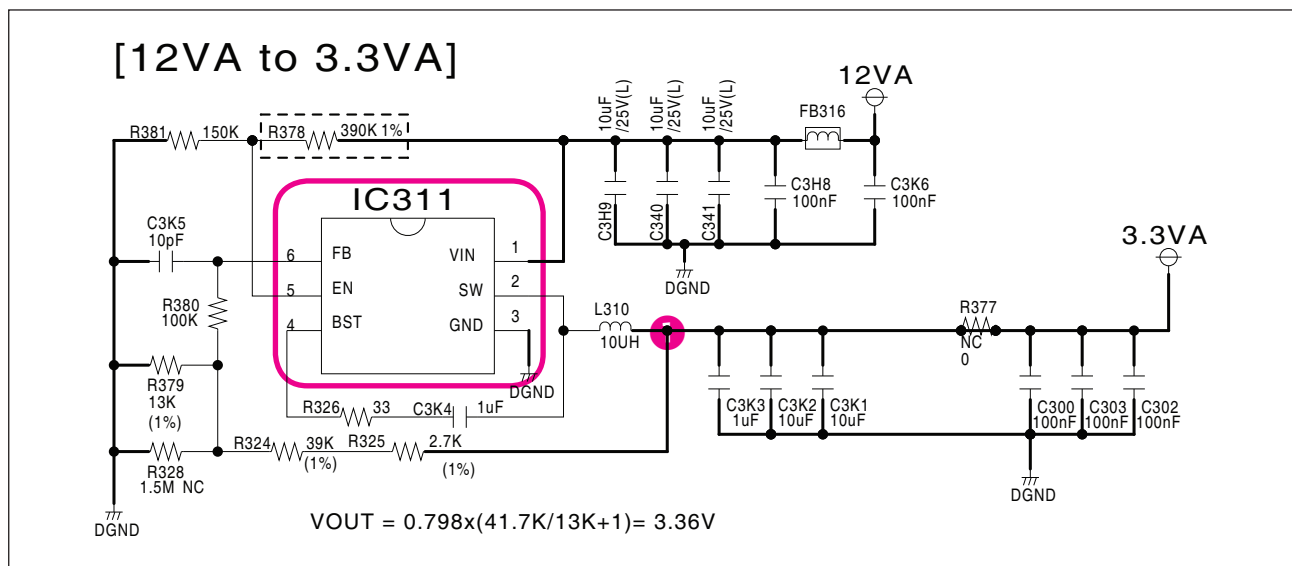
1-3-1. Solution

Replace MAIN board.

1-3-2. How to troubleshoot (Countermeasure)

- 1) Please check 3.3 VA of IC311 pin2 L310.
- 2) If 12 VA is OK, but 3.3 VA is abnormal at pin2 L310 of IC311 (VOUT), IC311 block has problem.

1-3-3. Service hint (Any picture / Remark)



< MAIN board top view >

ONE POINT REPAIR GUIDE

NO BOOTING WHEN YOU TURN THE UNIT ON, NO MESSAGE OR “HELLO” ON FRONT PANEL

When you turn on your set, it will blank / no message on front panel, LCD doesn't work.

1-4. LCD System power VCC_5V

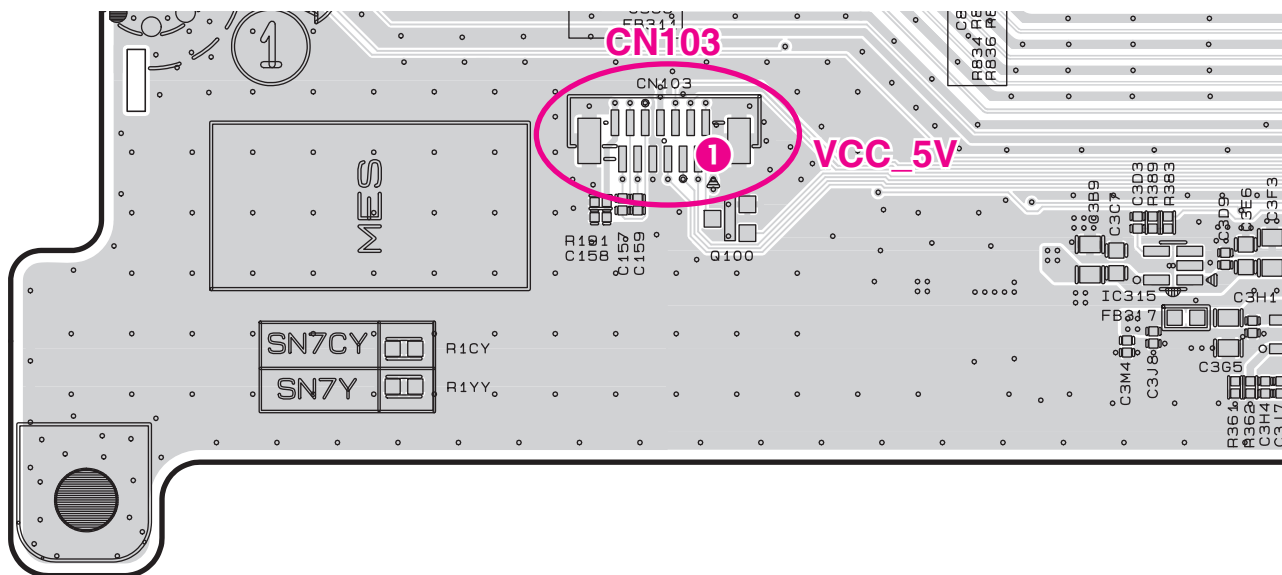
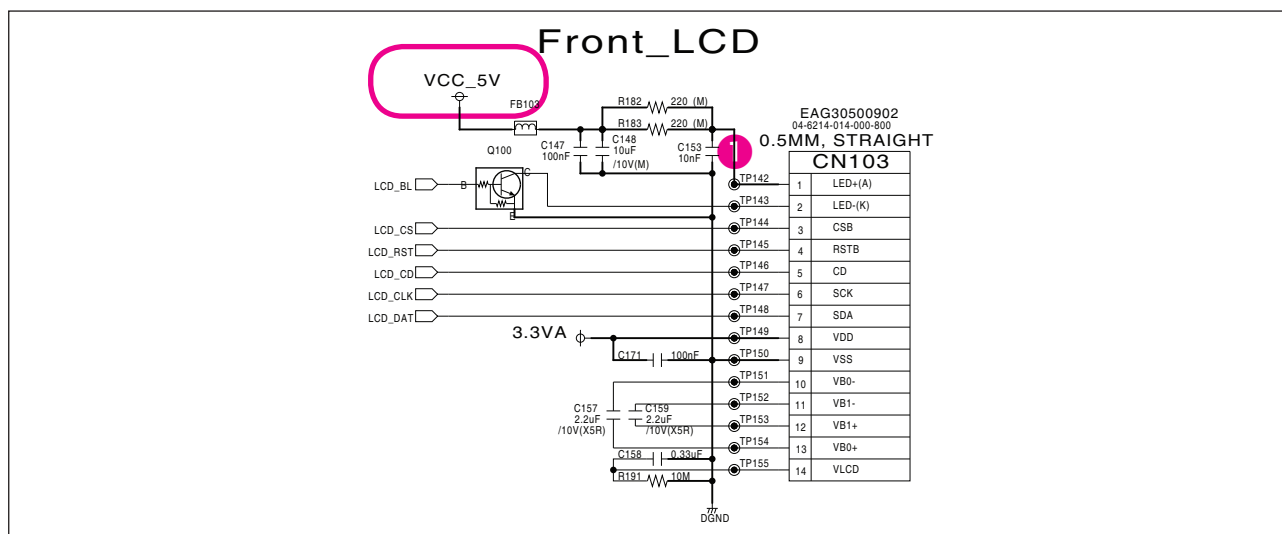
1-4-1. Solution

Replace MAIN/ LCD module.

1-4-2. How to troubleshoot (Countermeasure)

- 1) Please check VCC_5V of CN103 pin1.
- 2) If VCC_5 V is abnormal, replace MAIN board.
- 3) If VCC_5 V OK, replace LCD module.

1-4-3. Service hint (Any picture / Remark)



< MAIN board top view >

ONE POINT REPAIR GUIDE

2. NO SOUND

2-1. BLUETOOTH

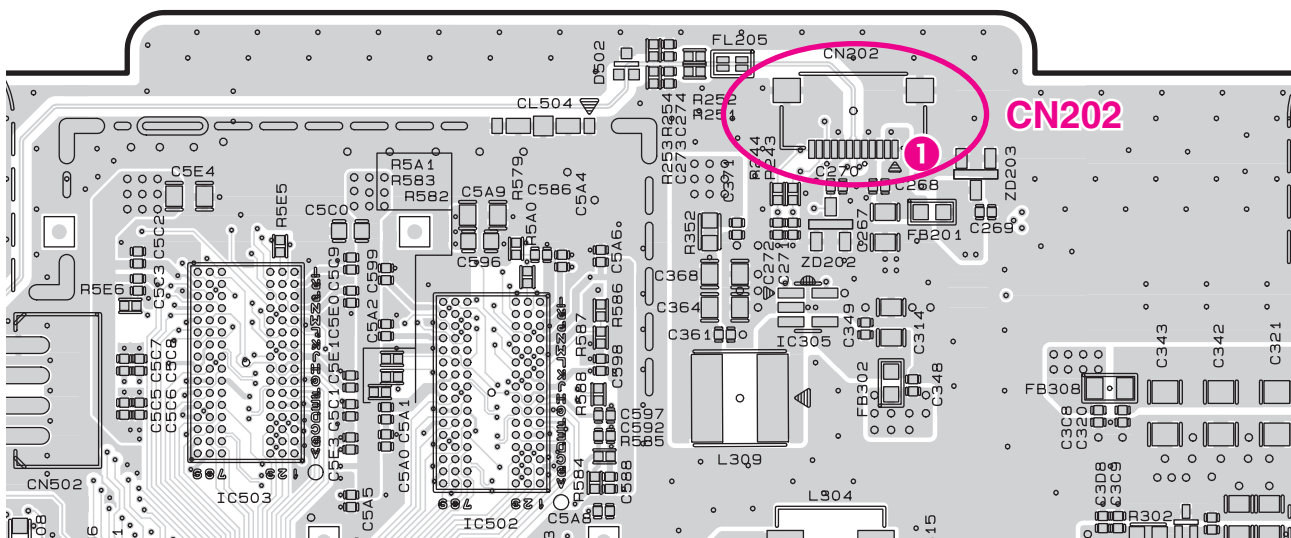
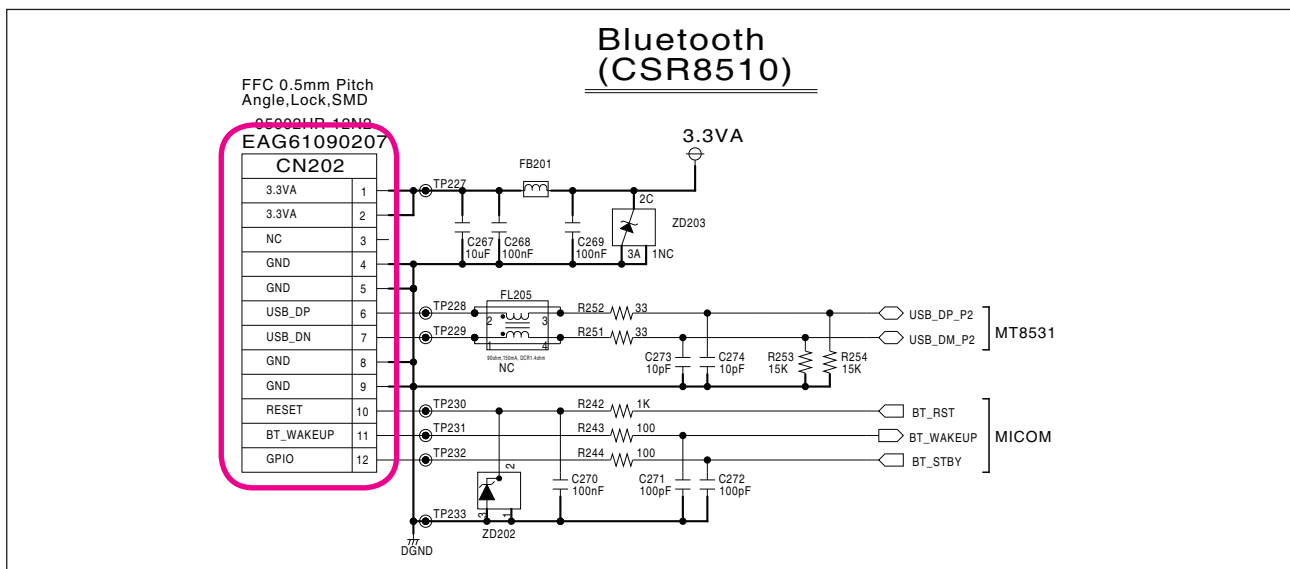
2-1-1. Solution

Replace MAIN board.

2-1-2. How to troubleshoot (Countermeasure)

- 1) Please check status of bluetooth cable connection. (at CN202 and BT module)
- 2) Please check 3.3 VA (at pin1, 2 of CN202).
If 3.3 VA is OK, please check USB_DP_P2, BT_RST, BT_WAKEUP, BT_STBY (pin6, 10, 11, 12).
If no signal, please replace MAIN board.

2-1-3. Service hint (Any picture / Remark)



< MAIN board top view >

ONE POINT REPAIR GUIDE

NO SOUND

2-2. OPTICAL

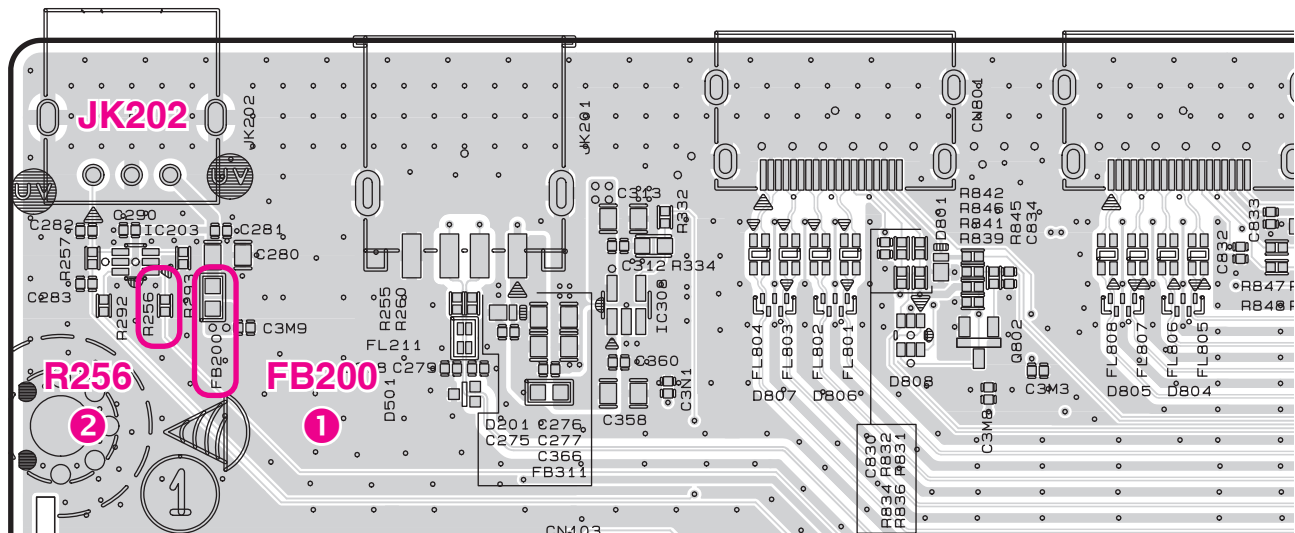
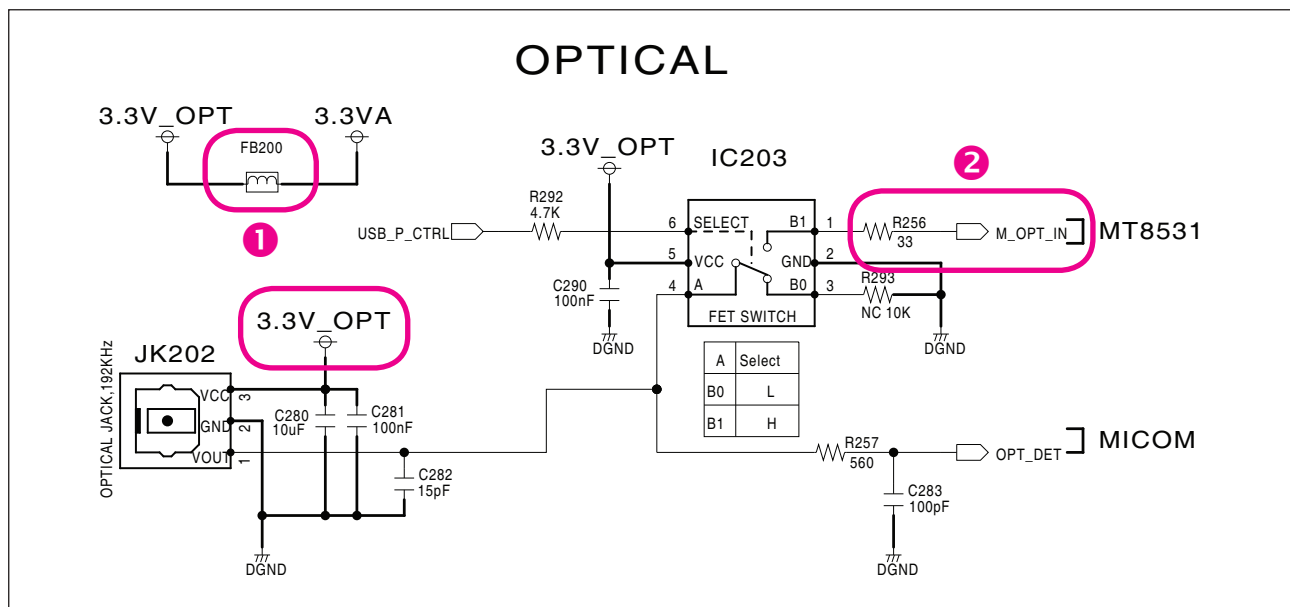
2-2-1. Solution

Replace MAIN board.

2-2-2. How to troubleshoot (Countermeasure)

- 1) Please check 3.3V_OPT at FB200.
- 2) If 3.3V_OPT is OK, please check M_OPT_IN signal (R256) when OPTICAL mode.
- 3) If signal is abnormal, replace MAIN board.

2-2-3. Service hint (Any picture / Remark)



< MAIN board top view >

ONE POINT REPAIR GUIDE

NO SOUND

2-3. HDMI

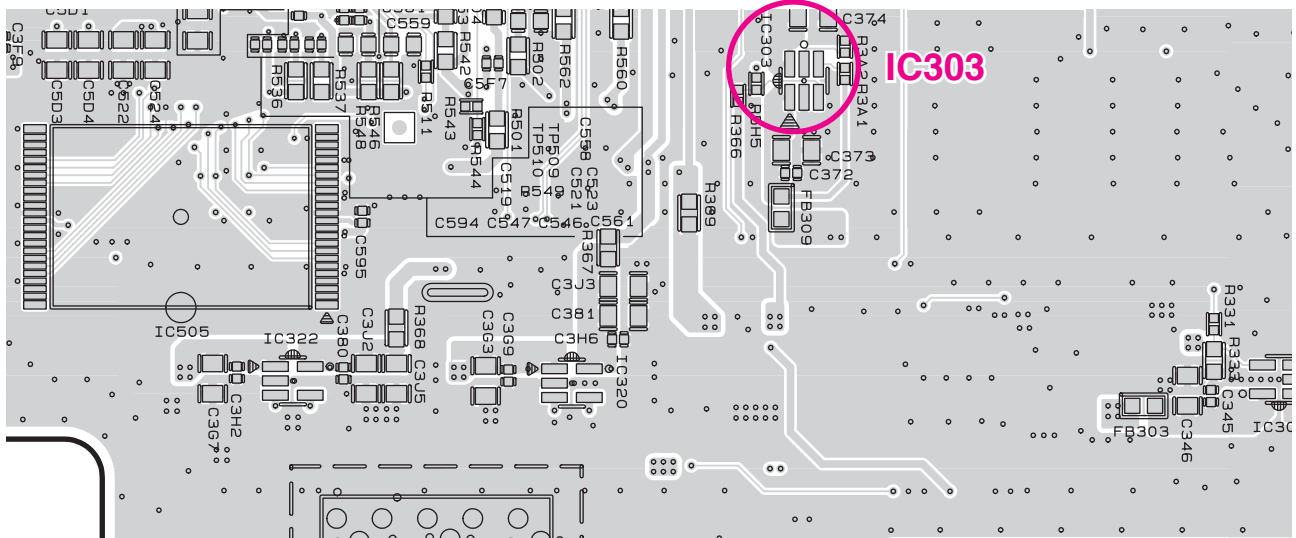
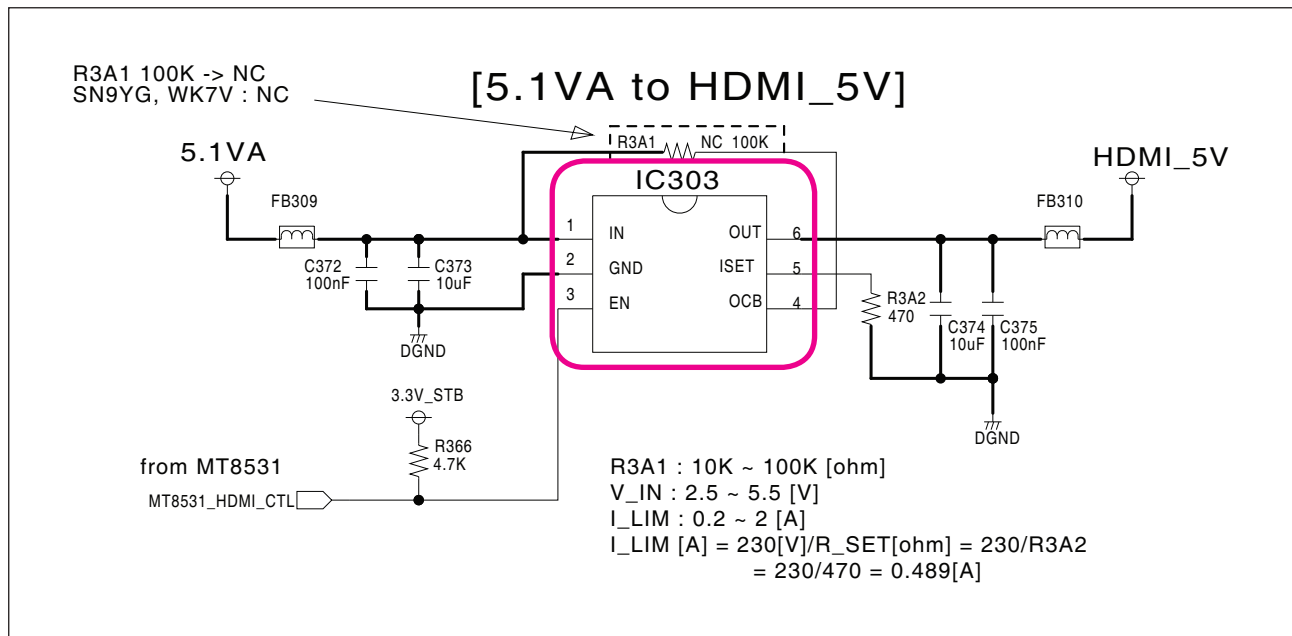
2-3-1. Solution

Replace MAIN board.

2-3-2. How to troubleshoot (Countermeasure)

- 1) Please check soldering status of HDMI jack and check HDMI_5V at IC303 pin6.
- 2) If soldering status or HDMI_5V are abnormal, at first retouch them, then is not good, replace MAIN board.

2-3-3. Service hint (Any picture / Remark)



< MAIN board bottom view >

ONE POINT REPAIR GUIDE

NO SOUND

2-4. USB

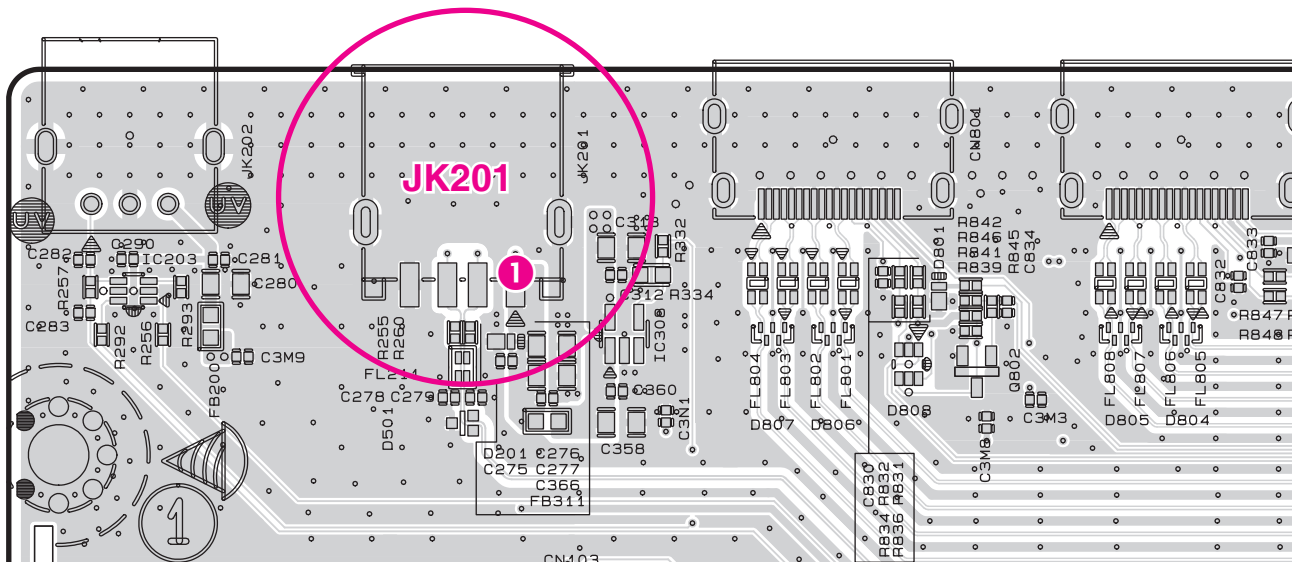
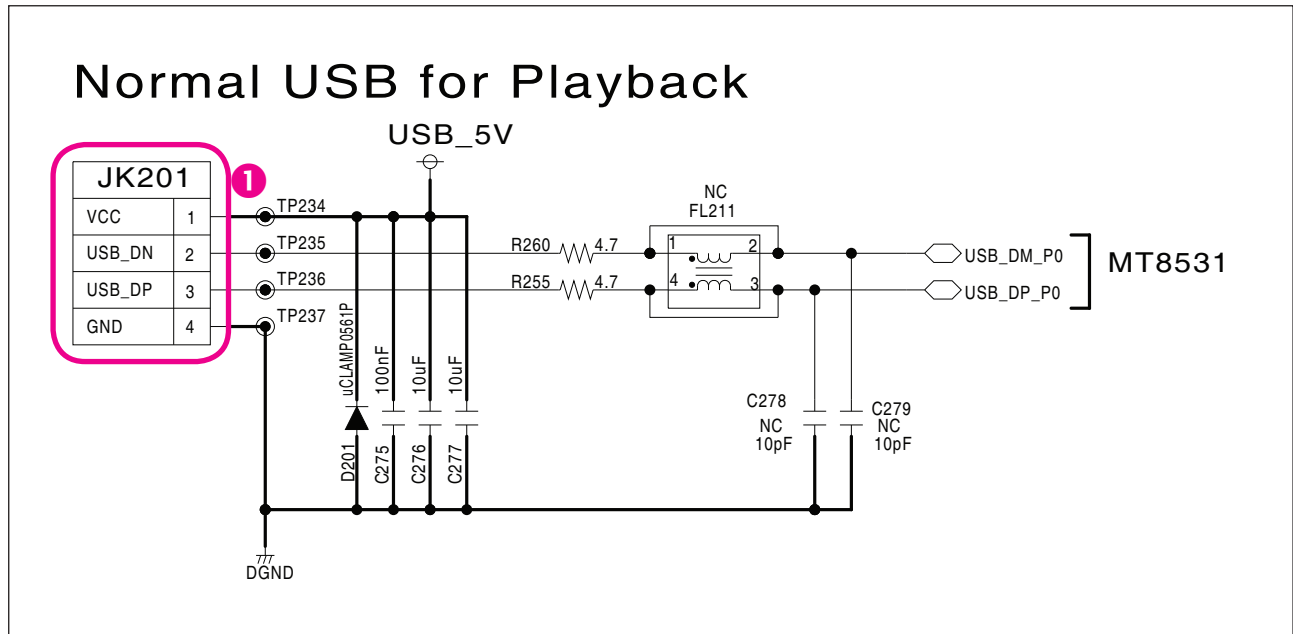
2-4-1. Solution

Replace MAIN board.

2-4-2. How to troubleshoot (Countermeasure)

- 1) Please check USB_5V at JK201 pin1.
- 2) If soldering status or USB_5V has abnormal status, replace MAIN board.

2-4-3. Service hint (Any picture / Remark)



< MAIN board top view >

ONE POINT REPAIR GUIDE

3. PROTECTION ERROR

No display or No Sound.

3-1. D(DC) PROTECTION

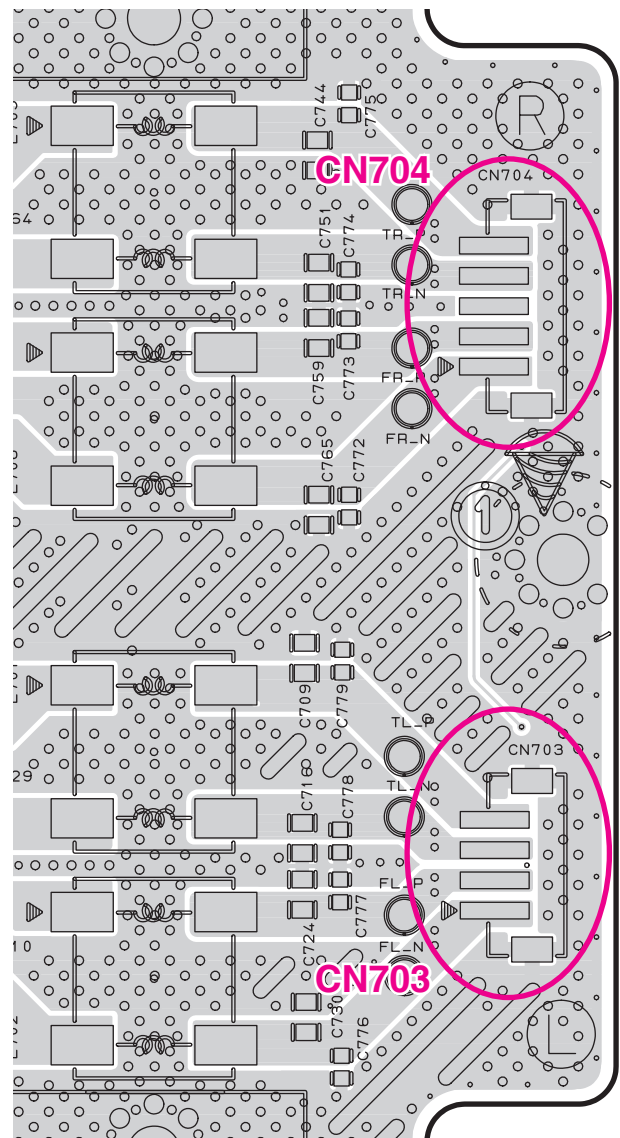
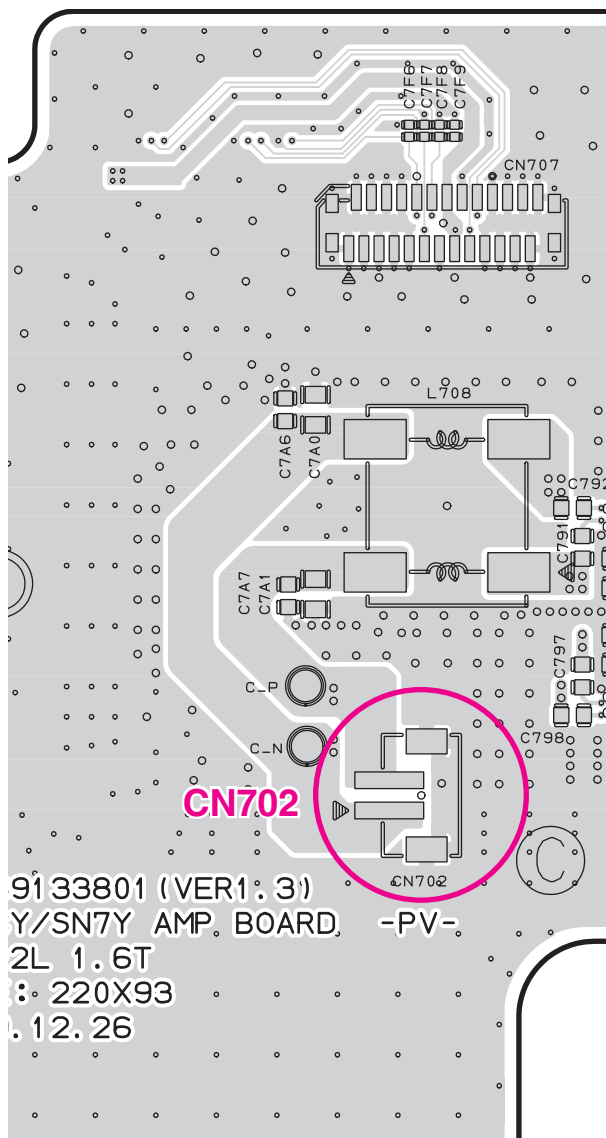
3-1-1. Solution

Replace AMP board.

3-1-2. How to troubleshoot (Countermeasure)

- 1) Check DC voltage of speaker out FL+/-, TOPL+/- (CN703 pin1, 2, 3, 4), FR +/-, TOPR+/- (CN704 pin1, 2, 4, 5), and C+/- (CN702 pin1, 2).
- 2) Check resistor crack, cold solder of PWM IC out (AR701, AR702, AR703).
- 3) Check speaker cable's abnormal.
- 4) If PWM IC out is ok and speaker out (FL+/-, FR+/-, TWL+/-, TWR+/-, C+/-) has DC voltage, then replace AMP board.

3-1-3. Service hint (Any picture / Remark)



< AMP board top view >

ONE POINT REPAIR GUIDE

PROTECTION ERROR

No display or No Sound.

3-2. B(BURNT) PROTECTION

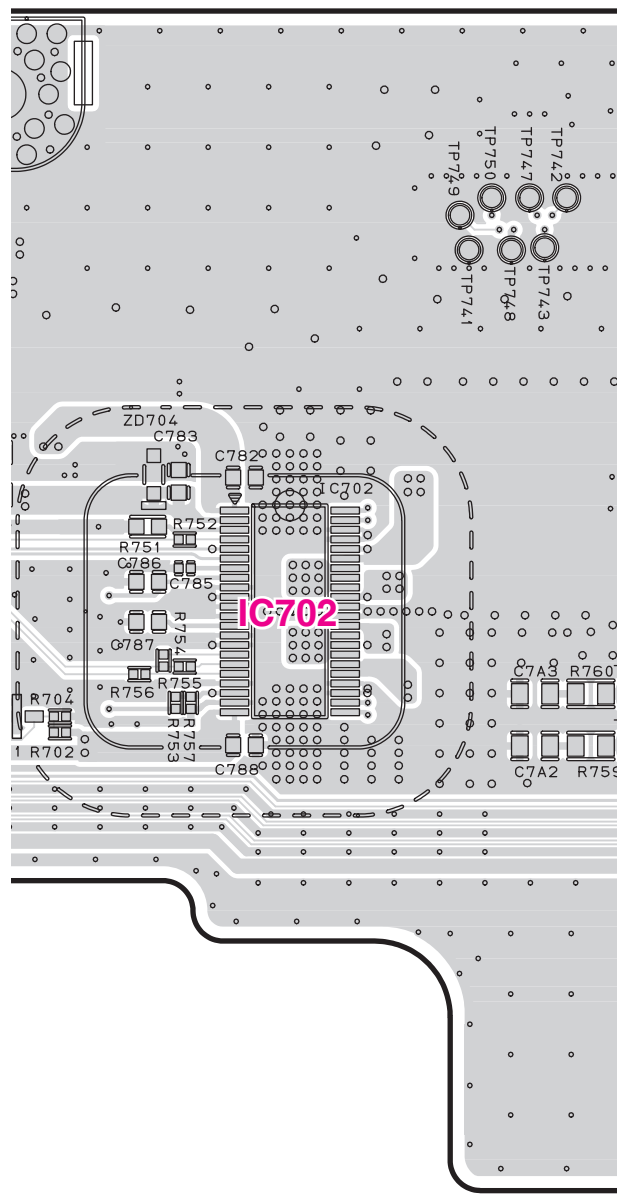
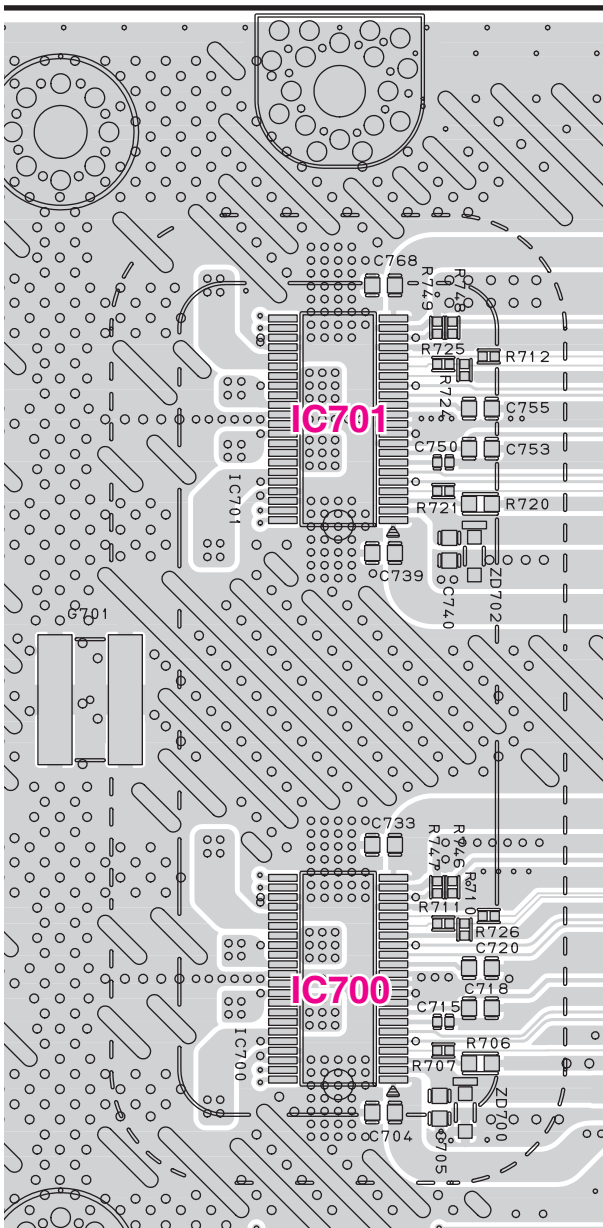
3-2-1. Solution

Replace AMP board.

3-2-2. How to troubleshoot (Countermeasure)

- 1) Check voltage 12 V of IC700, IC701, IC702 at pin1 ~ 2, if 12 V has problem refer to STEP 1-1 IC704 12VA.
- 2) If 12 V is OK, replace AMP board.

3-2-3. Service hint (Any picture / Remark)



< AMP board bottom view >

WAVEFORMS OF MAJOR CHECK POINT

1. CRYSTAL

1

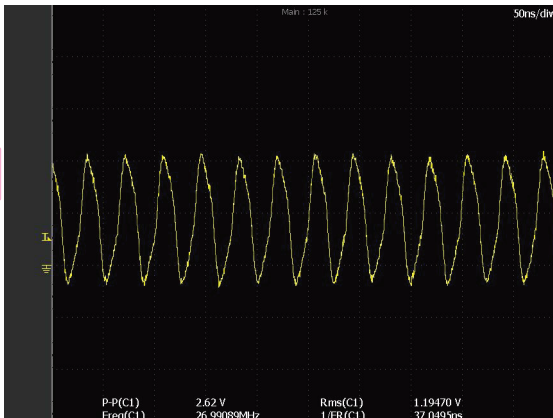
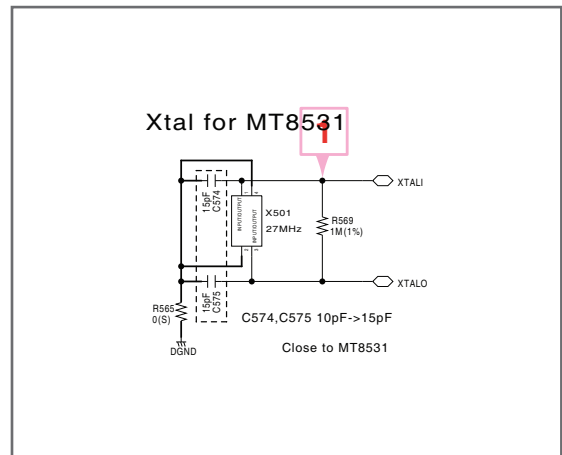


FIG 1-1. X501 (27 MHz)



2

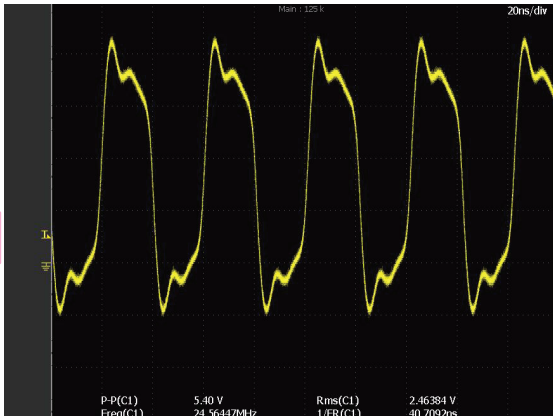
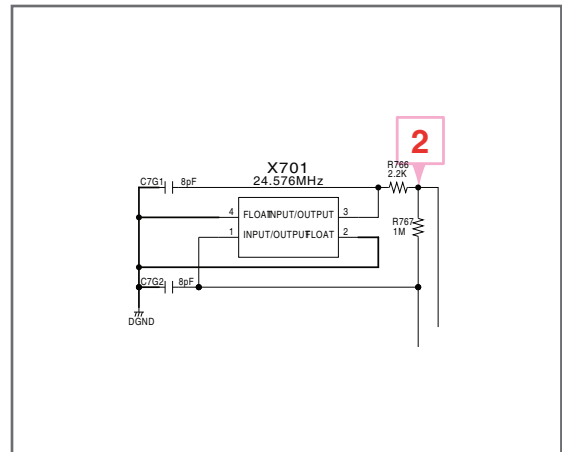


FIG 1-2. X701 (24.576 MHz)



2. FLASH MEMORY

3

4

5

6

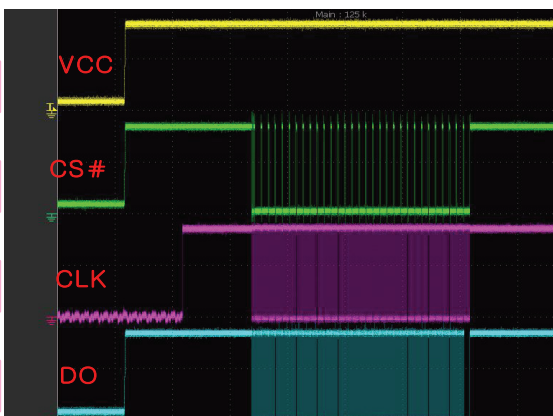
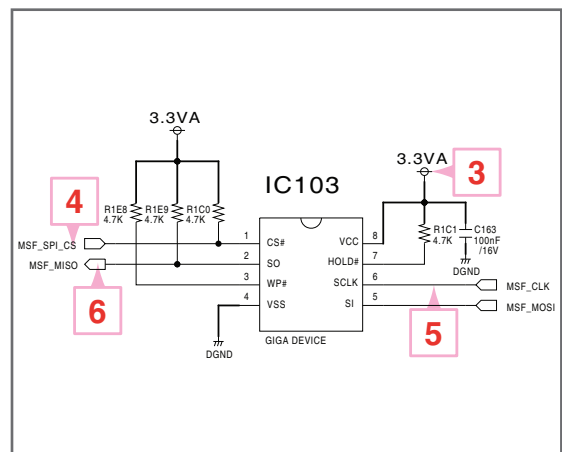


FIG 2. VCC, CS#, CLK, DO



3. BUZZER

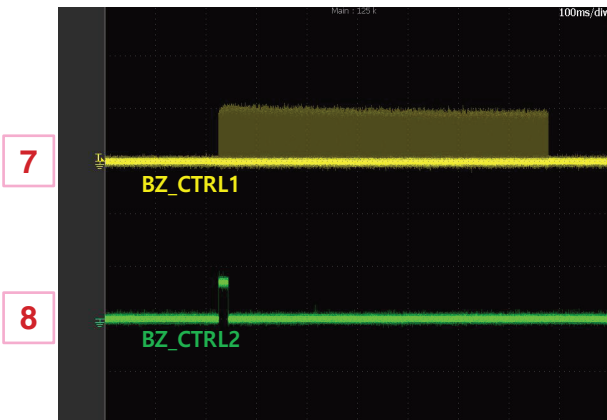


FIG 3-1. BZ_CTRL1, BZ_CTRL2

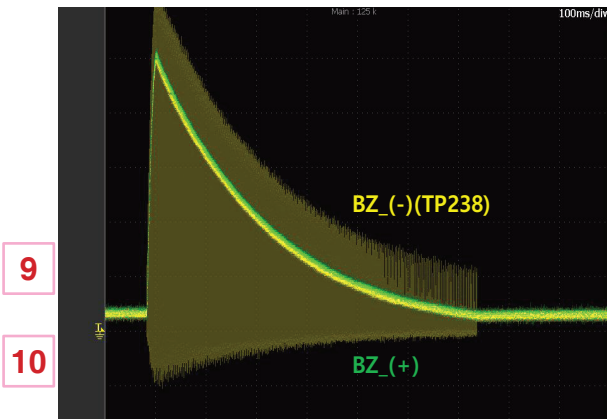
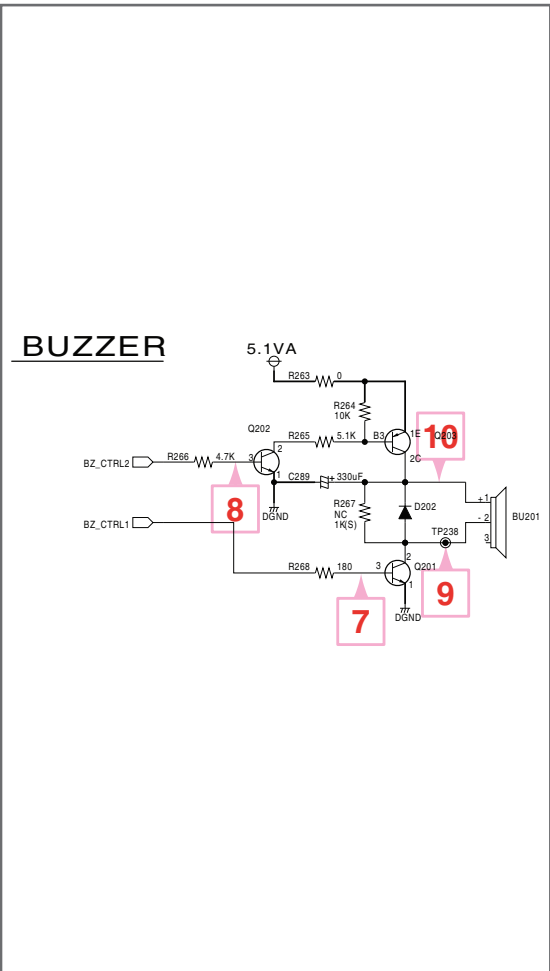


FIG 3-2. BZ_(-), BZ_(+)



4. USB

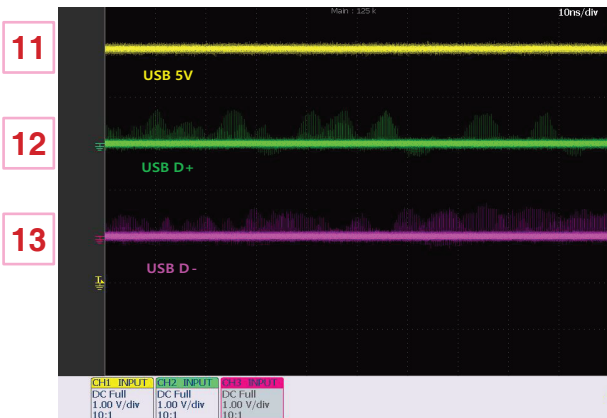
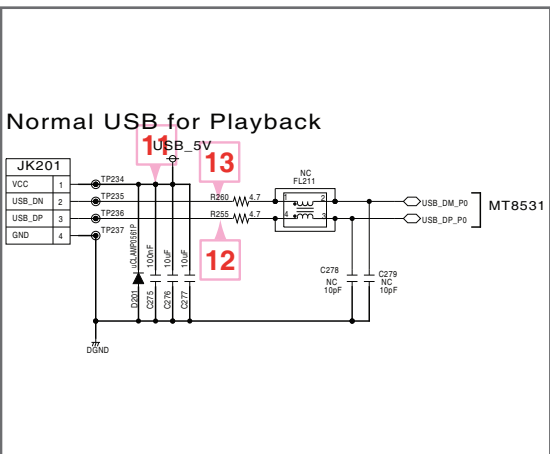


FIG 4. USB 5 V, USB D+, USB D-



5. REMOTE CONTROL

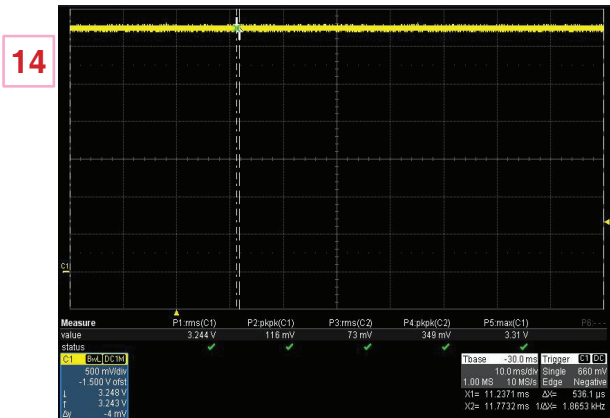


FIG 5-1. Input Voltage

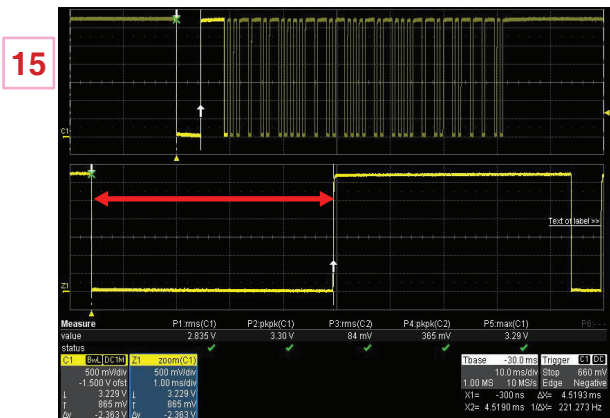


FIG 5-2. Low Timing

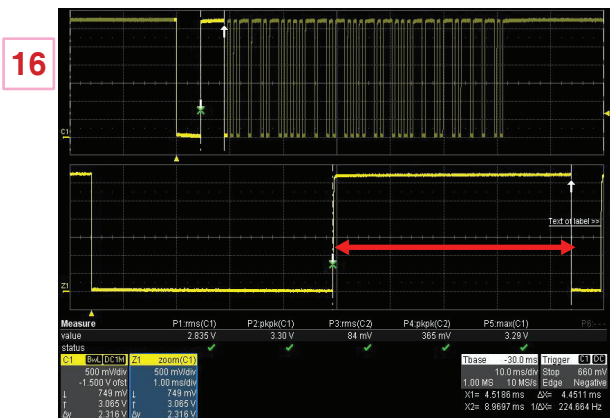
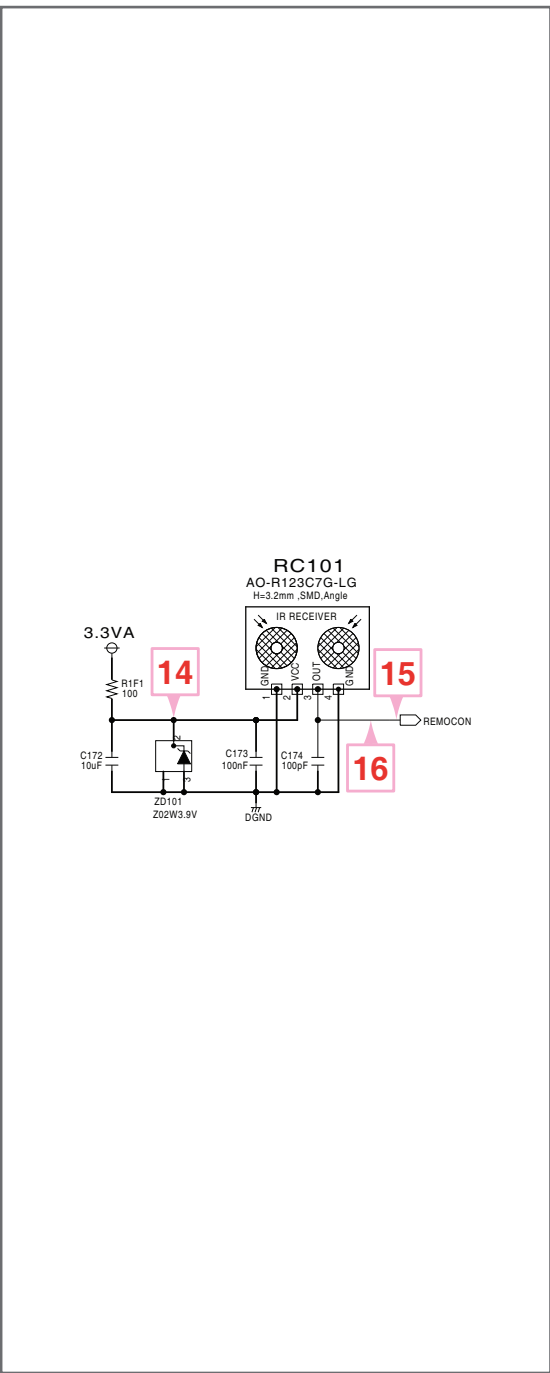


FIG 5-3. High Timing

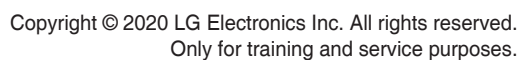


Item	Measured	Spec.
Input Level	3.24 V	2.7 ~ 5.5 V
“ Low” Timing	4.52 ms	3.6 ms ~ 5.04 ms
“ High” Timing	4.45 ms	4.08 ms ~ 5.04 ms

17



3-18



CIRCUIT VOLTAGE CHART

1. IC VOLTAGE

Designator	Description	Pin No.	Pin Name	Voltage Spec.	Measured Voltage	Temperature Spec.
IC100	Serial Flash Memory	8	VCC	2.7 V~3.6 V	3.3 V	85 °C
IC101 SN7Y ONLY	Serial Flash Memory	8	VCC	2.7 V~3.6 V	3.3 V	85 °C
IC102	Microcontrollers	11	AVCC	1.8 V~3.6 V	3.3 V	85 °C
		16, 38, 64, 87	DVCC	1.8 V~3.6 V	3.3 V	
IC103	Serial Flash Memory	8	VCC	2.7 V~3.6 V	3.3 V	85 °C
IC201	CMOS BUS BUFFER	20	VCC	2.0 V~5.5 V	3.3 V	85 °C
IC202 SN7Y ONLY	CMOS BUS BUFFER	20	VCC	2.0 V~5.5 V	3.3 V	85 °C
IC203	Analog Switch	5	VCC	1.65 V~5.5 V	1.5 V	85 °C
IC301	DC,DC Converter	9	VIN	4.5 V~17 V	12.0 V	125 °C
		10	VOUT	0.6 V~5.225 V	1.0 V	
IC302	DC,DC Converter	1	VIN	4.2 V~17 V	12.0 V	125 °C
		2	VOUT	0.8 V~10 V	5.1 V	
IC303	Analog Switch	1	VIN	2.5 V~5.5 V	5.2 V	125 °C
		6	VOUT	0 V~5.5 V	5.1 V	
IC305	DC,DC Converter	4	VIN	2.5 V ~ 5.5 V	5.1 V	125 °C
		3	VOUT	0 V~5.5 V	1.5 V	
IC307	Analog Switch	5	VIN	2.5 V~5.5 V	5.1 V	125 °C
		1	VOUT	0 V~5.5 V	5.1 V	
IC308	Analog Switch	5	VIN	2.5 V~5.5 V	5.1 V	125 °C
		1	VOUT	0 V~5.5 V	5.1 V	
IC311	DC,DC Converter	1	VIN	4.2 V~17 V	12.0 V	125 °C
		2	VOUT	0.8 V~10 V	3.3 V	
IC314	Analog Switch	5	VIN	2.5 V~5.5 V	3.3 V	125 °C
		1	VOUT	0 V~5.5 V	3.3 V	
IC315	Analog Switch	5	VIN	2.5 V~5.5 V	3.3 V	125 °C
		1	VOUT	0 V~5.5 V	3.3 V	
IC316	Analog Switch	5	VIN	2.5 V~5.5 V	3.3 V	125 °C
		1	VOUT	0 V~5.5 V	3.3 V	
IC317 SN7Y ONLY	Analog Switch	5	VIN	2.5 V~5.5 V	3.3 V	125 °C
		1	VOUT	0 V~5.5 V	3.3 V	
IC318	Analog Switch	5	VIN	2.5 V~5.5 V	3.3 V	125 °C
		1	VOUT	0 V~5.5 V	3.3 V	
IC320	LDO Voltage Regulator	1	VIN	2.3 V~6 V	3.3 V	125 °C
		5	VOUT	0.8 V~5 V	1.8 V	
IC321	LDO Voltage Regulator	1	VIN	2.3 V~6 V	3.3 V	125 °C
		5	VOUT	0.8 V~5 V	1.8 V	
IC322	LDO Voltage Regulator	1	VIN	2.3 V~6 V	3.3 V	125 °C
		5	VOUT	0.8 V~5 V	1.0 V	
IC501	Video Processors	E4, E5, H22, P28	VCC33IO	3.15 V~3.46 V	3.3 V	95 °C
		D7, E6, G25, N25	VCC18IO	1.71 V~1.89 V	1.8 V	
		K10, K15, K16, AC17, AC18, AC21, AC22	DVDD_CORE	0.95 V~1.05 V	1.0 V	
		AA24, AB24, AD20, AD21, AD22, AD23	DDRV_DDR3	1.425 V~1.575 V	1.5 V	
		C29	AVDD33	3.15 V~3.45 V	3.3 V	
		A6, Y8	AVDD18	1.71 V~1.89 V	1.8 V	
		A9	AVDD105	0.99 V~1.10 V	1.0 V	

Designator	Description	Pin No.	Pin Name	Voltage Spec.	Measured Voltage	Temperature Spec.
IC502	DDR3 SDRAM	B2, D9, G7, K2, K8, N1, N9, R1, R9	VDD	1.425 V~1.575 V	1.5 V	95 °C
		A1, A8, C1, C9, D2, E9, F1, H2, H9	VDDQ	1.425 V~1.575 V	1.5 V	
IC503	DDR3 SDRAM	B2, D9, G7, K2, K8, N1, N9, R1, R9	VDD	1.425 V~1.575 V	1.5 V	95 °C
		A1, A8, C1, C9, D2, E9, F1, H2, H9	VDDQ	1.425 V~1.575 V	1.5 V	
IC505	NAND Flash Memory	12, 37	VCC	2.0 V~5.5 V	3.3 V	85 °C
IC700	Audio Amplifier	1	GVDD_AB	-0.3 V~13.2 V	11.5 V	125 °C
		22	GVDD_CD	-0.3 V~13.2 V	11.5 V	
		36, 37, 38	PVDD_AB	-0.3 V~50 V	25.5 V	
		29, 30, 31	PVDD_CD	-0.3 V~50 V	25.5 V	
		2	VDD	-0.3 V~13.2 V	11.9 V	
		8	DVDD	-0.3 V~4.2 V	3.3 V	
		13	AVDD	-0.3 V~8.5 V	7.7 V	
IC701	Audio Amplifier	1	GVDD_AB	-0.3 V~13.2 V	11.5 V	125 °C
		22	GVDD_CD	-0.3 V~13.2 V	11.5 V	
		36, 37, 38	PVDD_AB	-0.3 V~50 V	25.5 V	
		29, 30, 31	PVDD_CD	-0.3 V~50 V	25.5 V	
		2	VDD	-0.3 V~13.2 V	11.9 V	
		8	DVDD	-0.3 V~4.2 V	3.3 V	
		13	AVDD	-0.3 V~8.5 V	7.7 V	
IC702	Audio Amplifier	1	GVDD_AB	-0.3 V~13.2 V	11.5 V	125 °C
		22	GVDD_CD	-0.3 V~13.2 V	11.5 V	
		36, 37, 38	PVDD_AB	-0.3 V~50 V	25.5 V	
		29, 30, 31	PVDD_CD	-0.3 V~50 V	25.5 V	
		2	VDD	-0.3 V~13.2 V	11.9 V	
		8	DVDD	-0.3 V~4.2 V	3.3 V	
		13	AVDD	-0.3 V~8.5 V	7.7 V	
IC703	Sound/Audio Processor	17, 52	VDD_IO	2.97 V~3.63 V	3.3 V	125 °C
		6, 25	VDD_CORE	1.08 V~1.32 V	1.2 V	
		34	VIN33_REG1	2.97 V~3.63 V	3.3 V	
		66	VIN33_REG2	2.97 V~3.63 V	3.3 V	
		68	VDD_PLL	1.08 V~1.32 V	1.2 V	
IC704	DC,DC Converter	2	VIN	4.0 V~36 V	25.5 V	125 °C
		3	VOUT	0.8 V~33 V	12.0 V	
IC705	Analog Switch	5	VIN	2.5 V~5.5 V	3.3 V	125 °C
		1	VOUT	0 V~5.5 V	3.3 V	
ICT01	Capacitive Touch Sensor	24	VDDIO	2.7 V~3.6 V	3.3 V	125 °C

MEMO

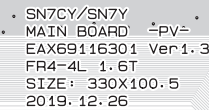
2. CAPACITOR VOLTAGE

Designator	Description	SPEC.	Real Value (#1, #2)/ V					Temperature Spec.
C703, C734, C738, C769, C790, C799, C7A9	Capacitor, AL,Chip	330 uF/35 V	25.30	25.40	25.40	25.50	25.40	-55 ~ 105 °C/5000 HR
C7A8	Capacitor, AL,Chip	10 uF/35 V	25.30	25.40	25.40	25.50	25.40	-40 ~ 105 °C/1000 HR
C7H4, C7H9	Capacitor, AL,Chip	47 uF/16 V	3.30	3.30	3.40	3.30	3.40	-55 ~ 105 °C/2000 HR
C7L4	Capacitor, AL,Chip	100 uF/16 V	3.30	3.30	3.40	3.30	3.40	-55 ~ 105 °C/2000 HR

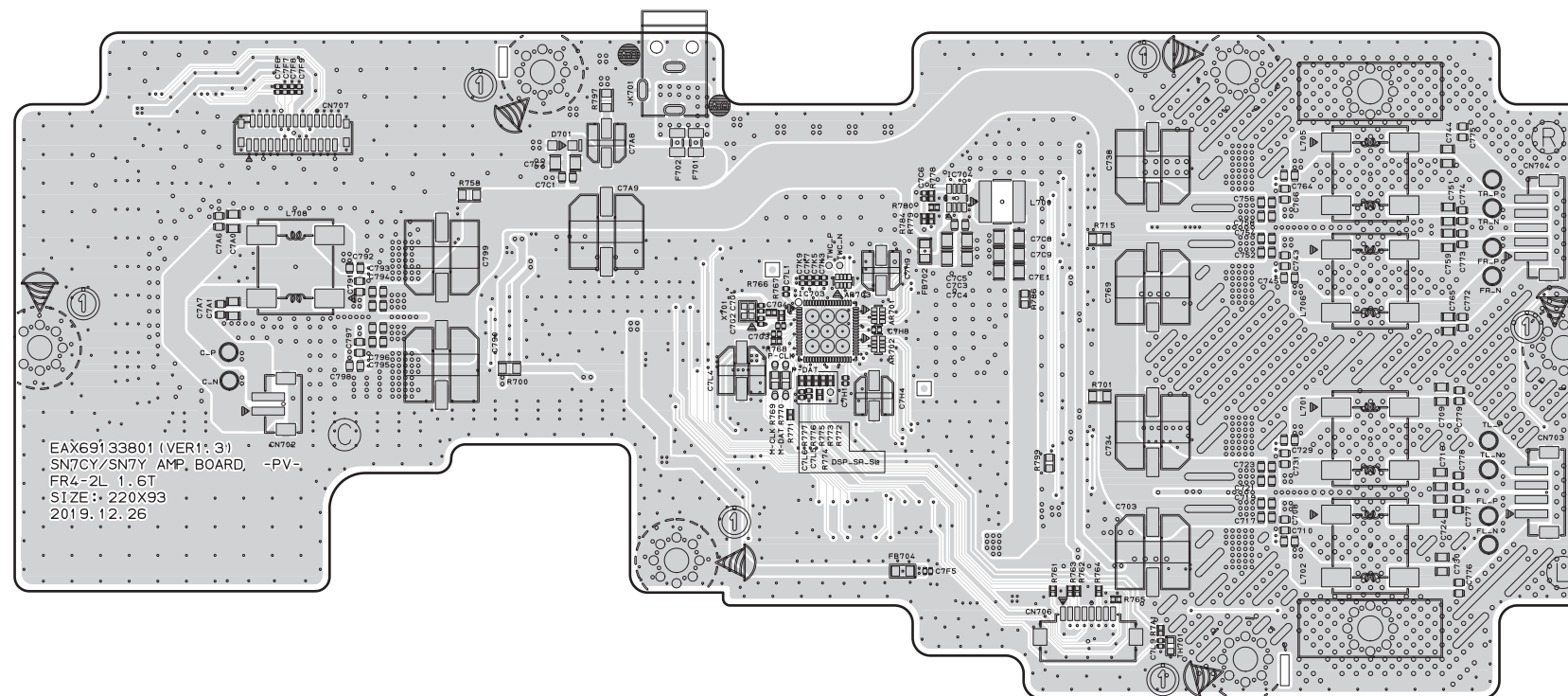
3. CONNECTOR VOLTAGE

CN100 (MAIN <=> WIRELESS WOFFER) / SN7Y ONLY			
POWER	MAIN	WIRELESS REAR	SPEC.
WLS_3V3	3.34	3.31 V	3.3 V (3.15~3.45 V)
CN101 (MAIN <=> WIRELESS REAR)			
POWER	MAIN	WIRELESS REAR	SPEC.
RBOX_3V3	3.34	3.31 V	3.3 V (3.15~3.45 V)
CN103 (MAIN <=> LCD Module)			
POWER	MAIN	LCD Module	SPEC.
3.3 VA	3.35 V	3.34 V	3.33 V (3.1~3.4 V)
VCC_5V	5.05 V	5.05 V	5.0 V (4.8~5.2 V)
CN202 (MAIN <=> BT Module)			
POWER	MAIN	BT Module	SPEC.
3.3 VA	3.4	3.38 V	3.3 VA (3.0~3.6 V)
CNT01 / CN707 (MAIN <=> TOUCH)			
POWER	AMP (CN707)	TOUCH (CNT01)	SPEC.
3.3 VA	3.35	3.34 V	3.3 V (3.15~3.45 V)

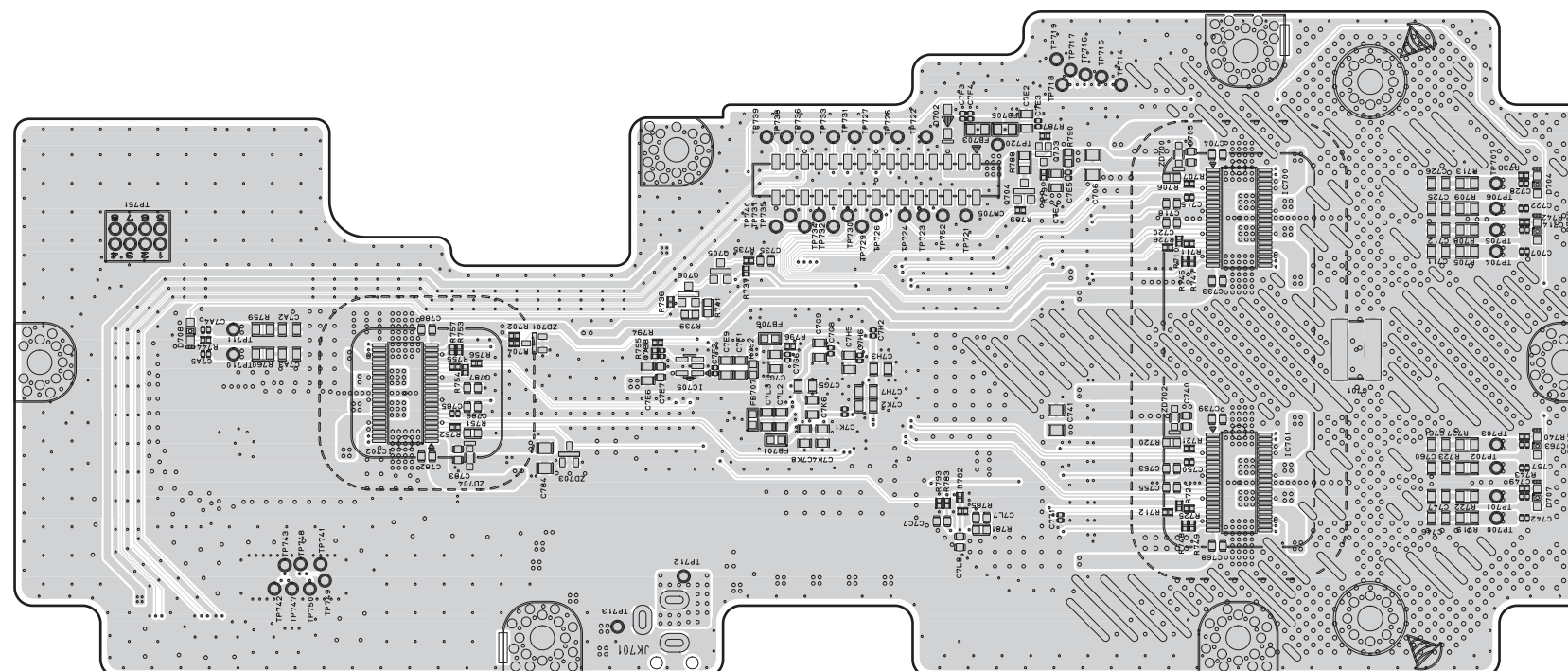
(TOP VIEW)



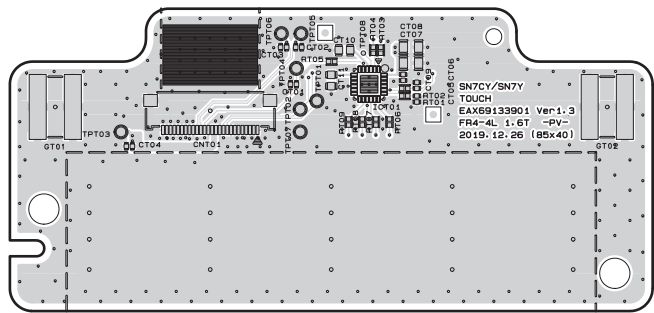
2. AMP P. C. BOARD DIAGRAM (TOP VIEW)



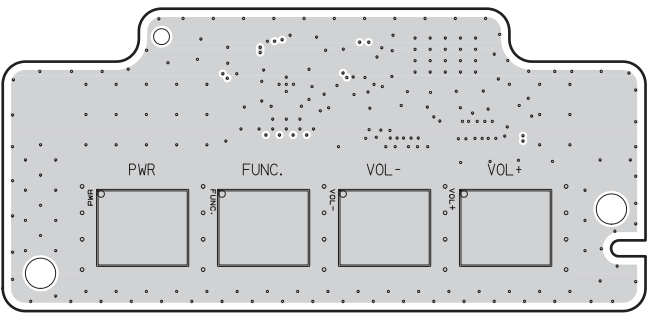
(BOTTOM VIEW)



3. TOUCH P. C. BOARD DIAGRAM
(TOP VIEW)



(BOTTOM VIEW)



MEMO

Handwriting practice area with 25 horizontal dotted lines.

MEMO

Handwriting practice area with 25 horizontal dotted lines.

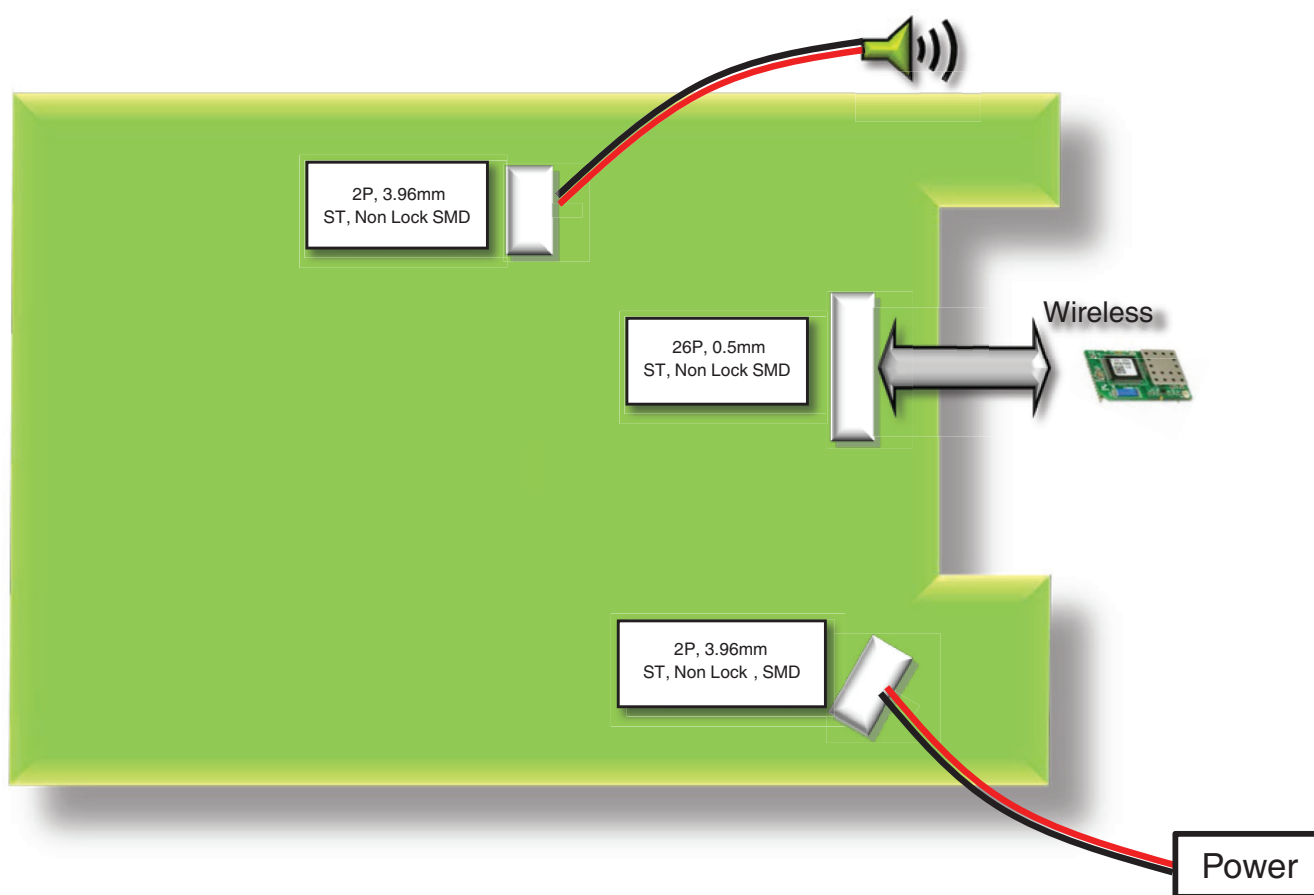
SECTION 4

WIRELESS SUBWOOFER PART (SN7Y ONLY)

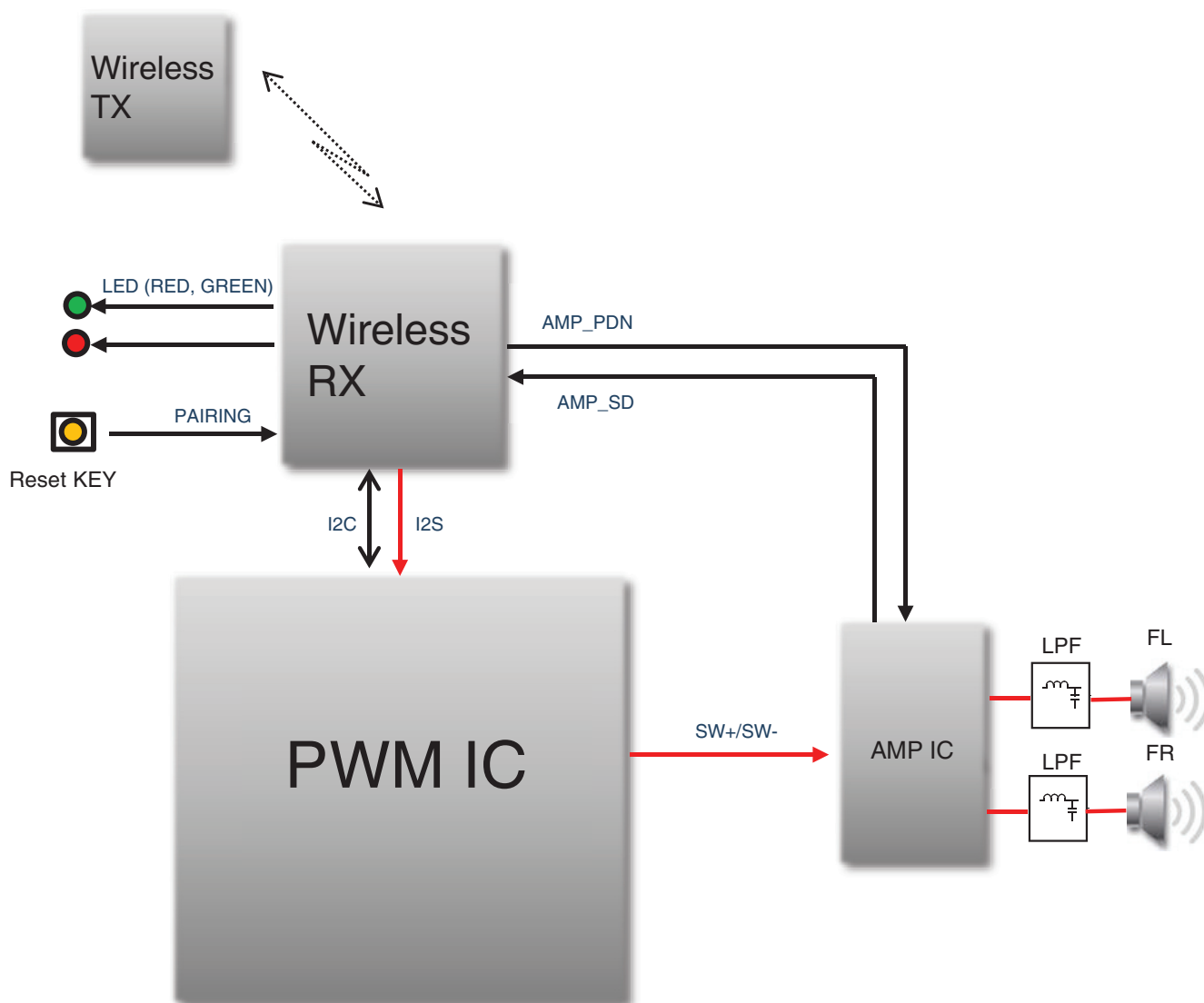
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WIRING DIAGRAM



BLOCK DIAGRAM



ONE POINT REPAIR GUIDE

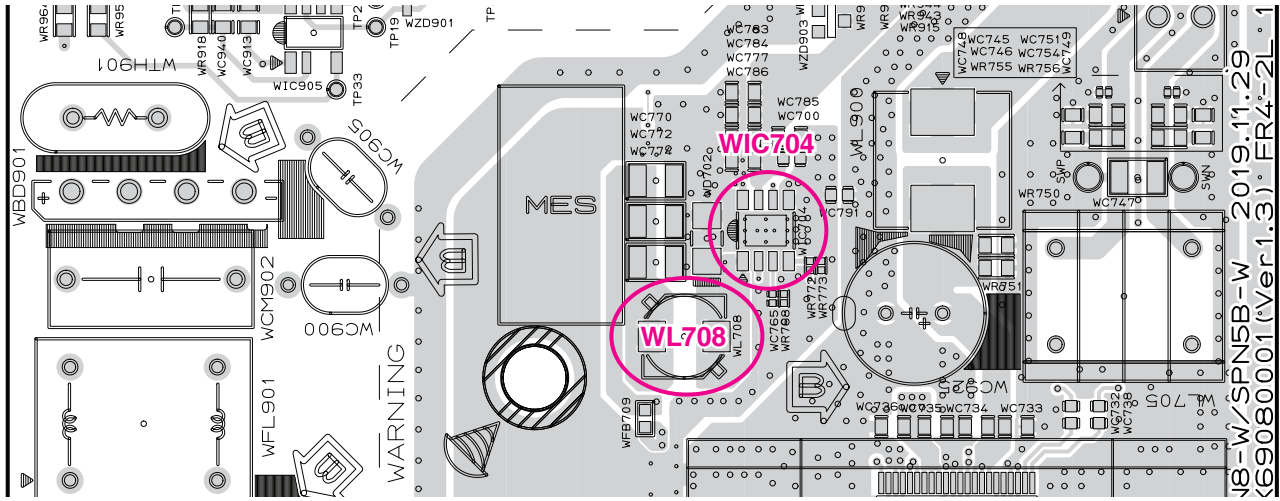
1. POWER ON ERROR

Fundamental power check points.

1-1. 12 V

- 1) Check 12 V at WL708.
- 2) If 12 V is not checked at the point, then find PVDD at pin7 of WIC704.
- 3) 1), 2) is NG ➔ Replace WIC704.

If you can't check PVDD voltage, then replace the PCB board.

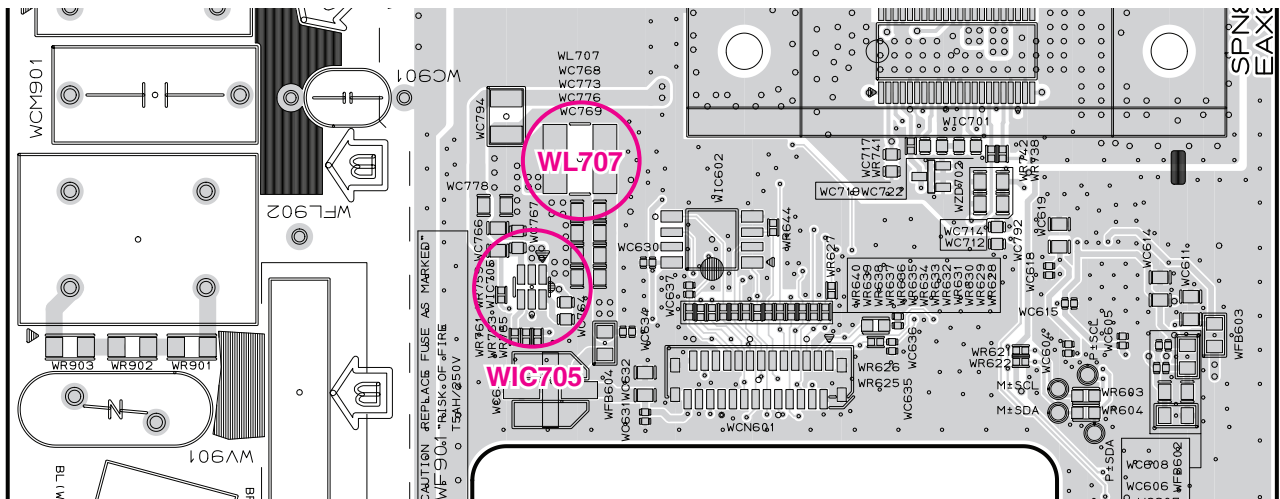


< Woofer SMPS & AMP board top view >

1-2. 3.3 VA

- 1) Check 3.3 VA at WL707 coil.
- 2) If 3.3 VA is not checked at the point, then find 12 VA at pin3 of WIC705.
- 3) 1), 2) is NG ➔ Replace WIC705.

If you can't check 12 VA voltage, refer to the step 1-1.



< Woofer SMPS & AMP board top view >

ONE POINT REPAIR GUIDE

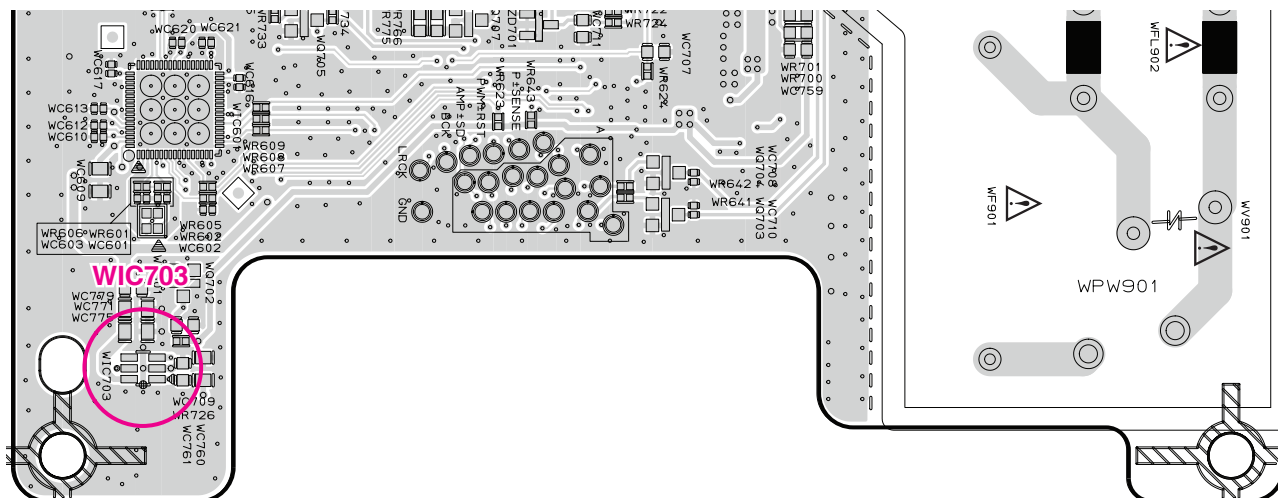
POWER ON ERROR

Fundamental power check points.

1-3. 3.3 VA

- 1) Check 3.3 VA at pin1 of WIC703.
- 2) Check 3.3V_PWM at pin6 of WIC703.
- 3) 1), 2) is NG ➔ Replace WIC703.

If you can't check PVDD voltage, then replace the PCB board.



< Woofer SMPS & AMP board bottom view >

WAVEFORMS OF MAJOR CHECK POINT

1. CRYSTAL

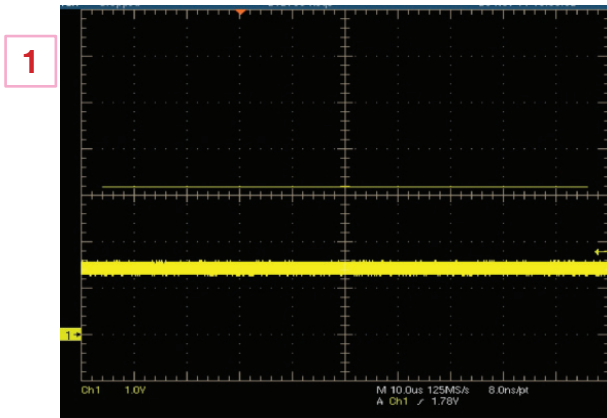
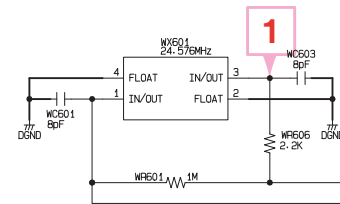


FIG 1. WX601 (24.576 MHz)



2. FLASH MEMORY

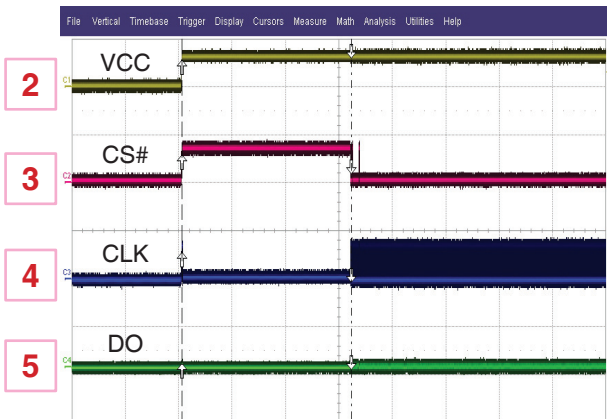
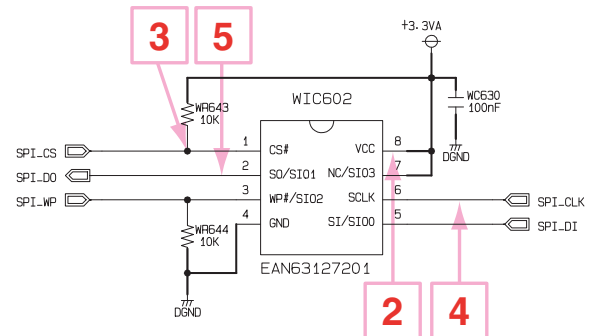


FIG 2. VCC, CS#, CLK, DO



3. VOLTAGE

6



FIG 3-1. Woofer PVDD

7



FIG 3-2. Woofer 12 VA

8

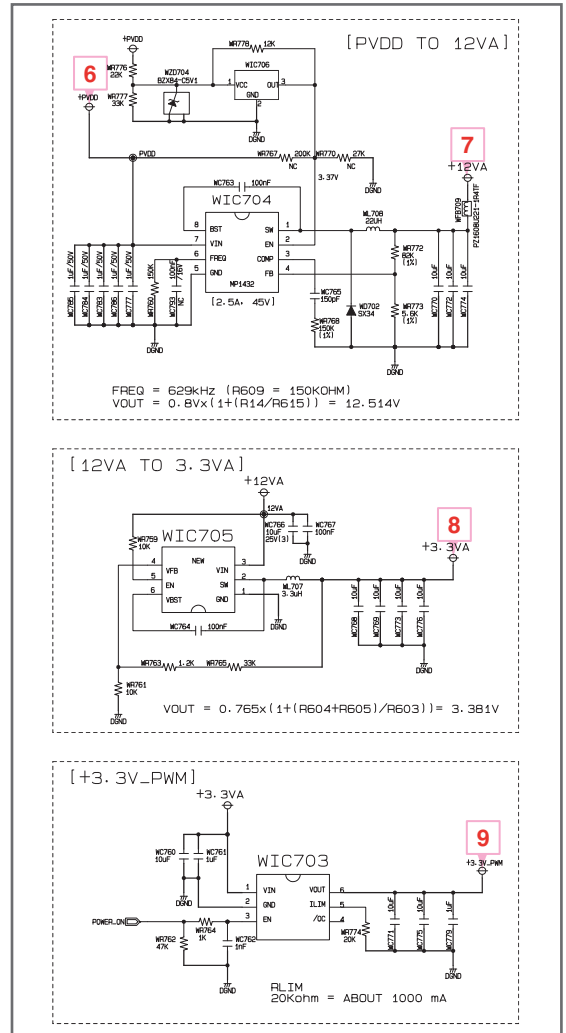


FIG 3-3. Woofer 3.3 VA

9



FIG 3-4. Woofer 3.3V_PWM



4. AMP VOLTAGE

10

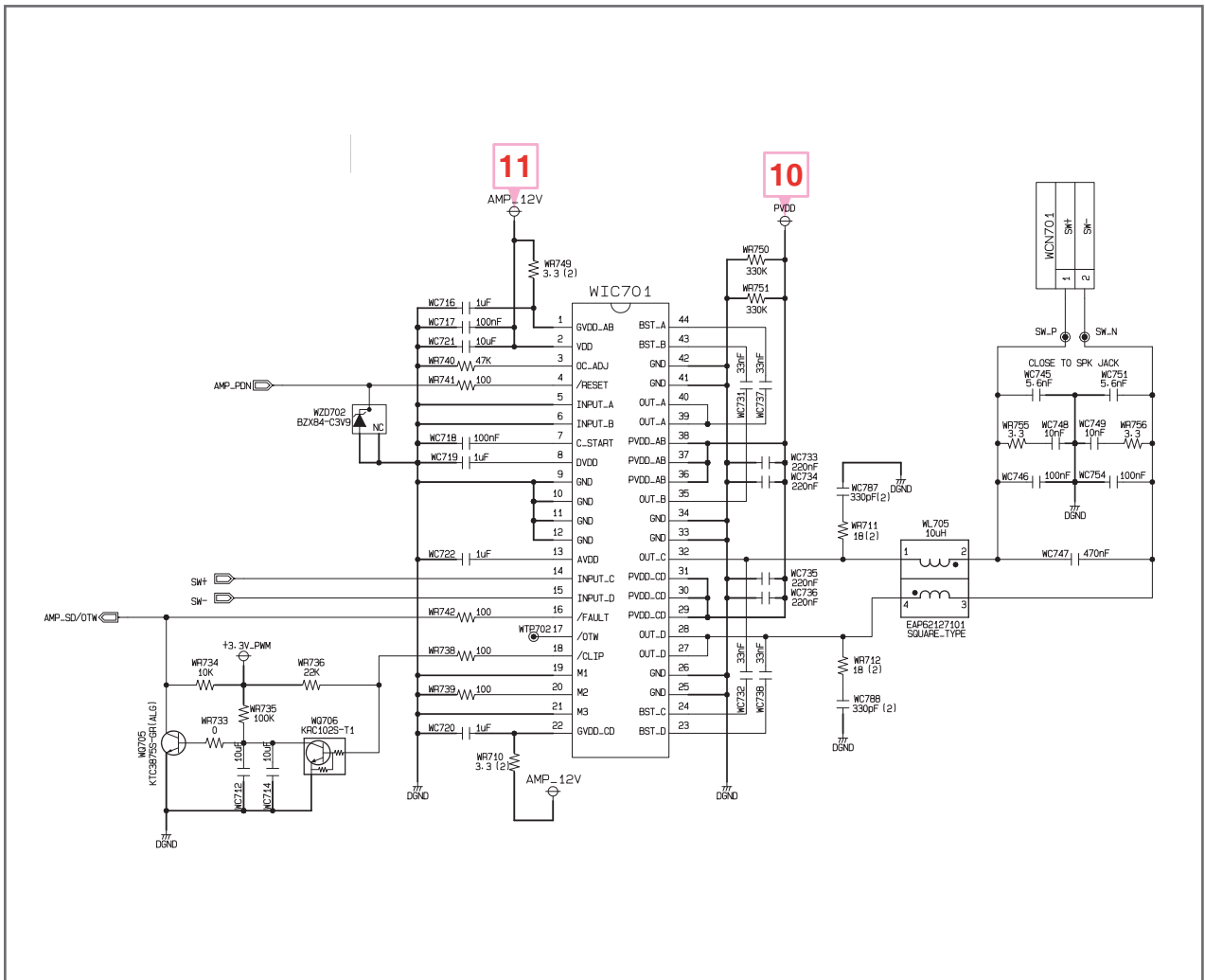


FIG 4-1. AMP PVDD

11



FIG 4-2. AMP_12V



5. PWM

12

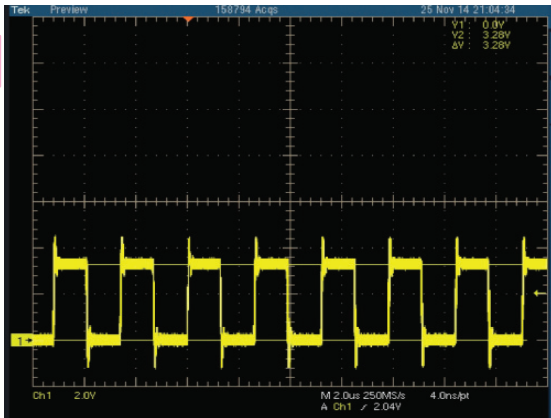


FIG 5-1. Woofer PWM SW+ Signal

13

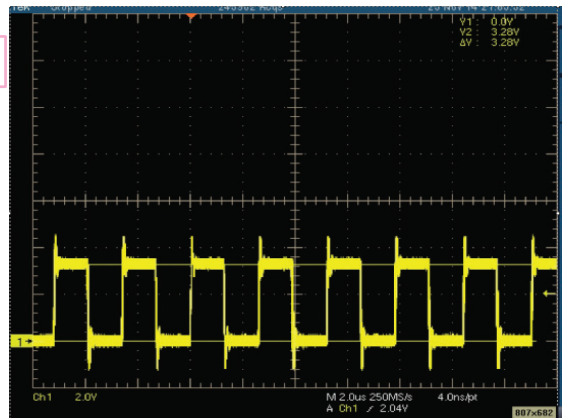
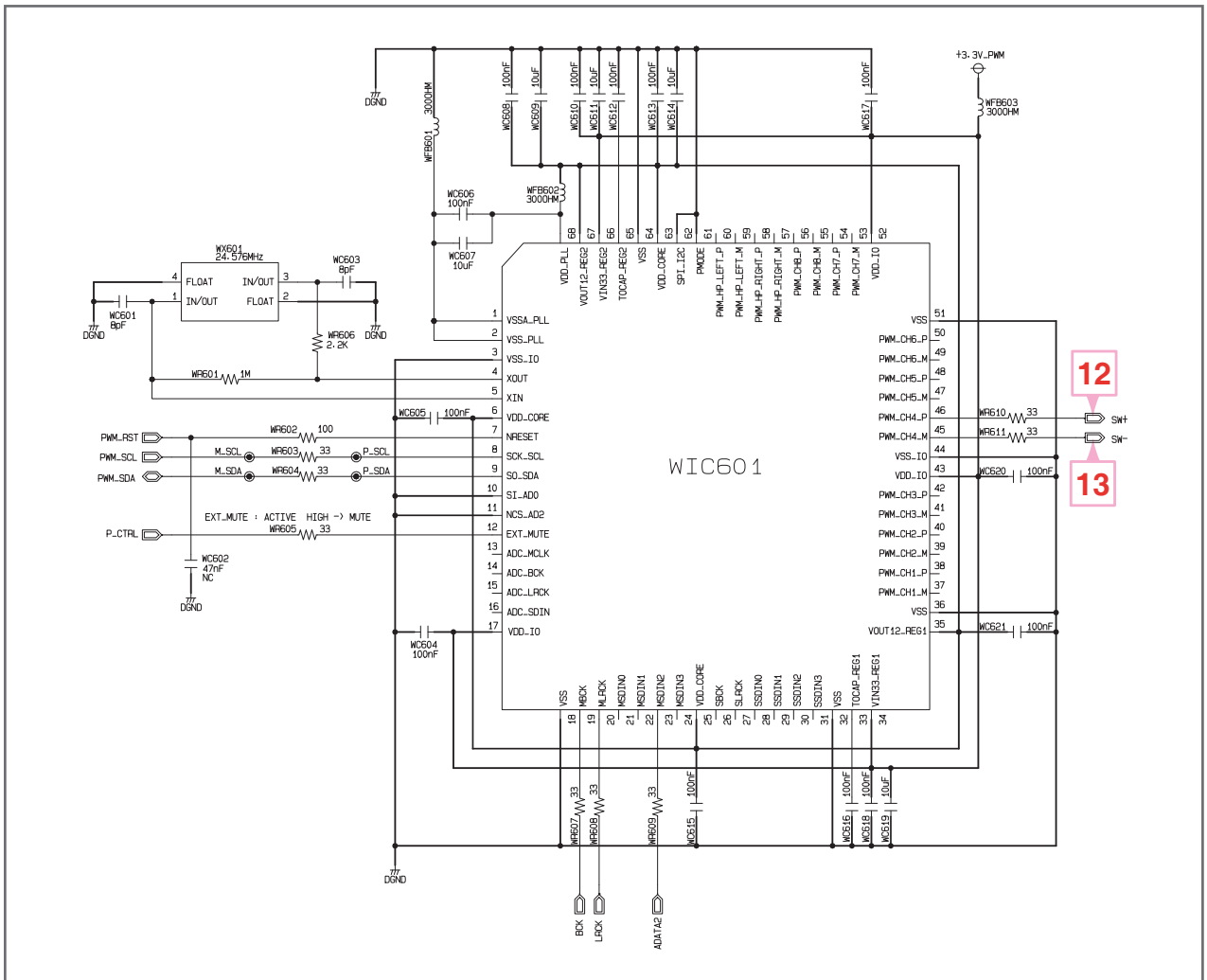


FIG 5-2. Woofer PWM SW- Signal



12

13

6. LED



FIG 6-1. Pairing Off Status → Red LED

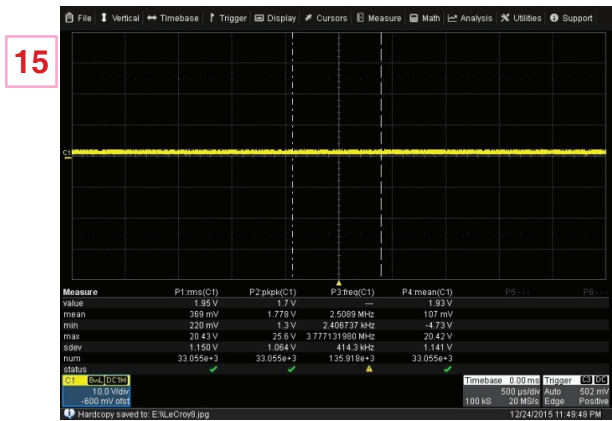
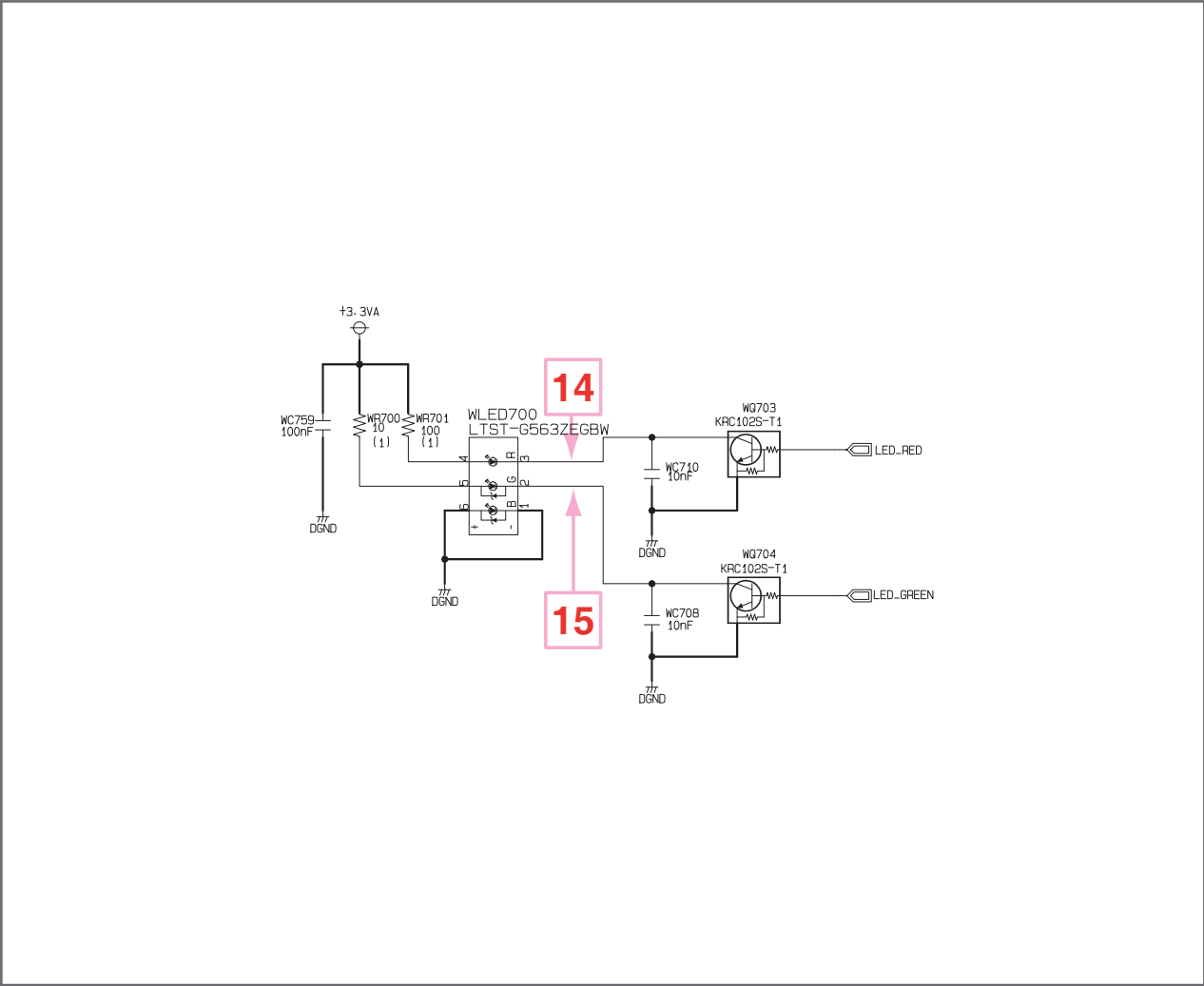


FIG 6-2. Pairing On Status → Green LED



MEMO

CIRCUIT VOLTAGE CHART

Location No.	Description	Pin Number	Specification	Real Value (#1, #2)	
WIC601	IC, Sound/Audio Processor	VDD_IO: #17, 43, 52	VDD_IO: 2.97 V ~ 3.63 V	3.37 V	3.37 V
		VDD_CORE: #6, 25, 63	VDD_CORE: 1.08 V ~ 1.32 V	1.27 V	1.27 V
		VDD_PLL: #68	VDD_PLL: 1.08 V ~ 1.32 V	1.28 V	1.28 V
WIC701	IC, Audio Amplifier	PVDD: #29, 30, 31, 36, 37, 38	PVDD: 12 V ~ 34 V	20.61 V	20.64 V
		GVDD: #1, 22	GVDD: 10.8 V ~ 13.2 V	12.41 V	12.42 V
		VDD: #2	VDD: 10.8 ~13.2V	12.47 V	12.47 V
WIC703	IC, Analog Switch	VIN: #1	VIN: 2.8 V ~ 5.5 V	3.42 V	3.42 V
		VOUT: #6	VOUT: 2.8 V ~ 5.5 V	3.41 V	3.41 V
WIC704	IC, DC,DC Converter	VIN: #7	VIN: 4.5 V ~ 45 V	34.61 V	34.64 V
		SW: #1	VOUT: 0.8 V ~ 42 V	12.53 V	12.53 V
WIC705	IC, DC,DC Converter	VIN: #3	VIN: 4.5 V ~ 17 V	12.52 V	12.52 V
		SW: #2	VOUT: 0.76 V ~ 7 V	3.42 V	3.42 V

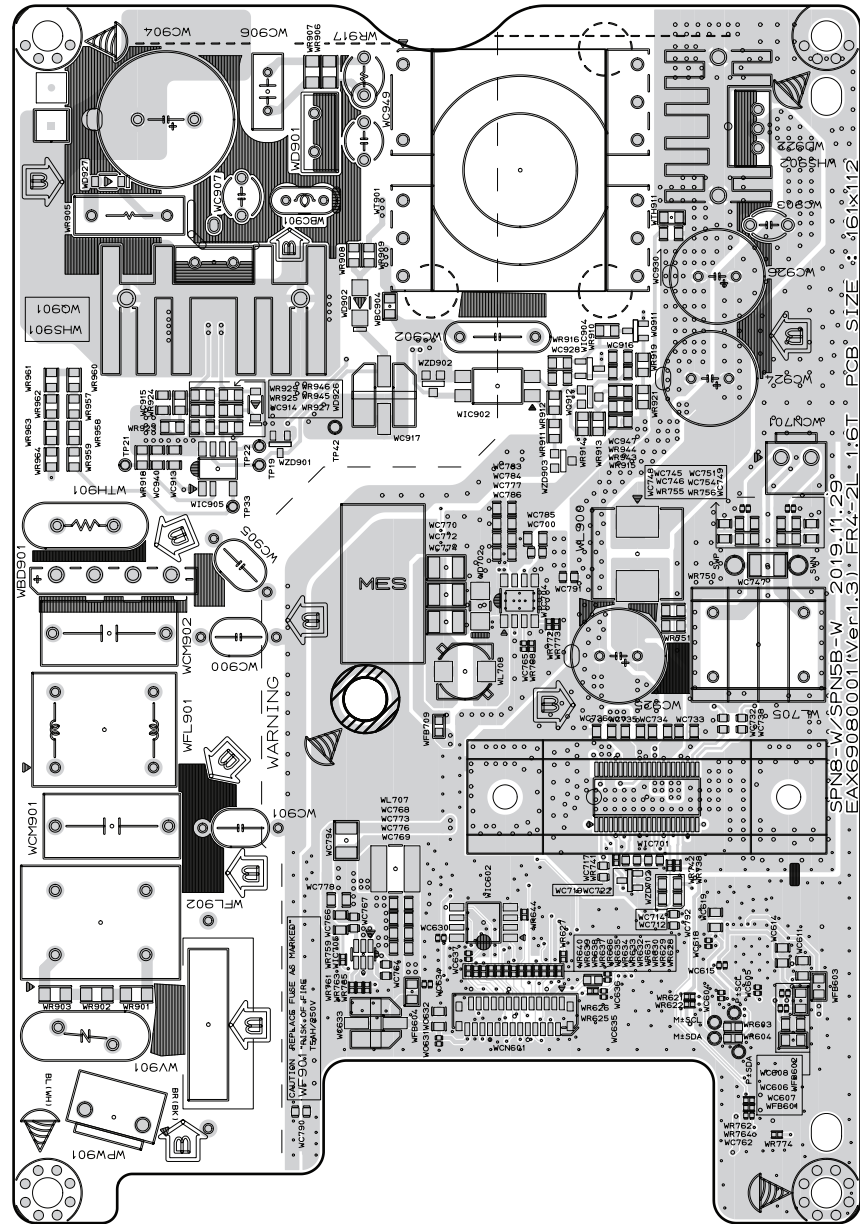
MEMO

This image shows a single sheet of white paper with horizontal ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

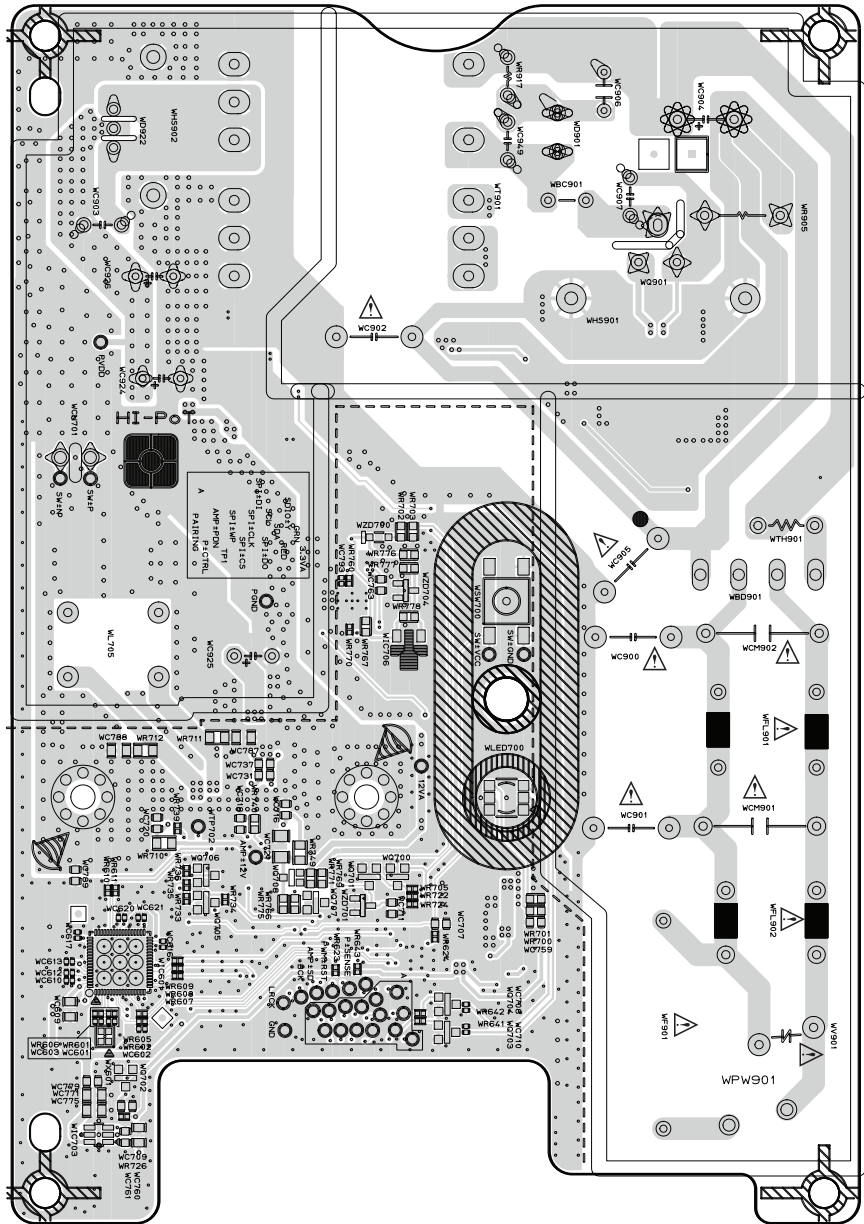
PRINTED CIRCUIT BOARD DIAGRAMS

1. WOOFER SMPS & AMP P. C. BOARD

(TOP VIEW)



(BOTTOM VIEW)



NOTE) Warning
Parts that are critical with respect to risk of fire or electrical shock.

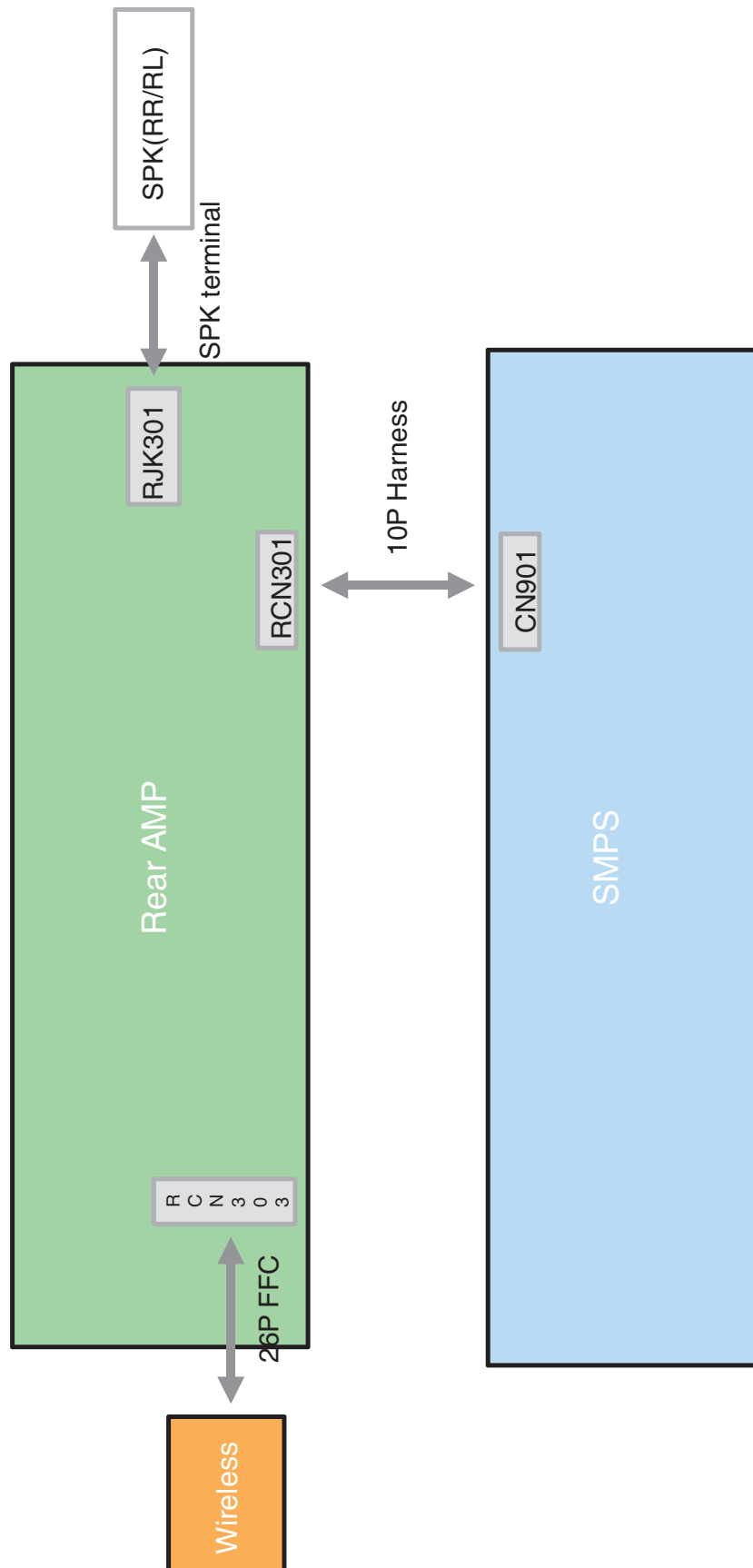
SECTION 5

WIRELESS RECEIVER PART (OPTION)

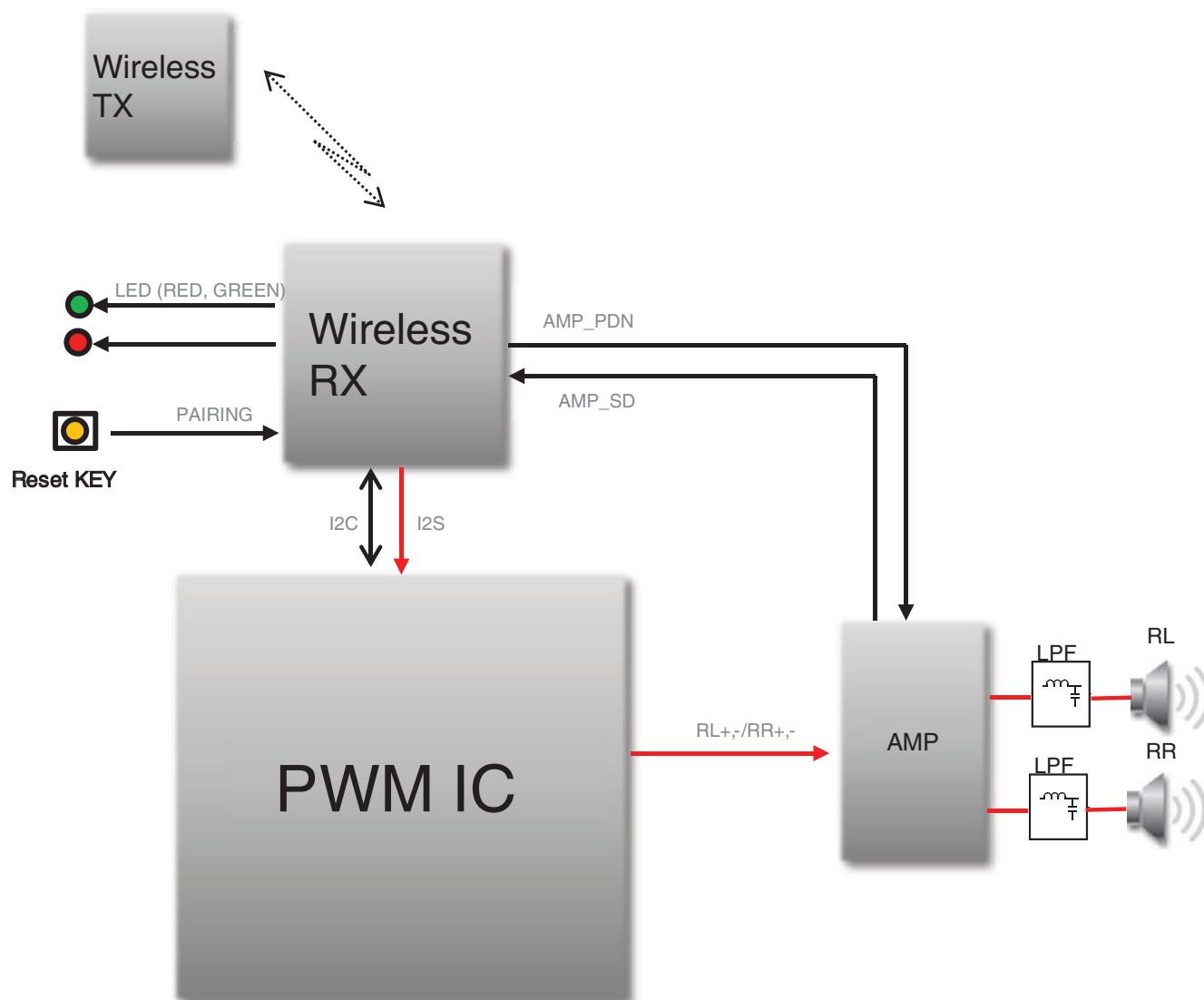
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2. WIRELESS RECEIVER AMP P. C. BOARD	5-11

WIRING DIAGRAM



BLOCK DIAGRAM



ONE POINT REPAIR GUIDE

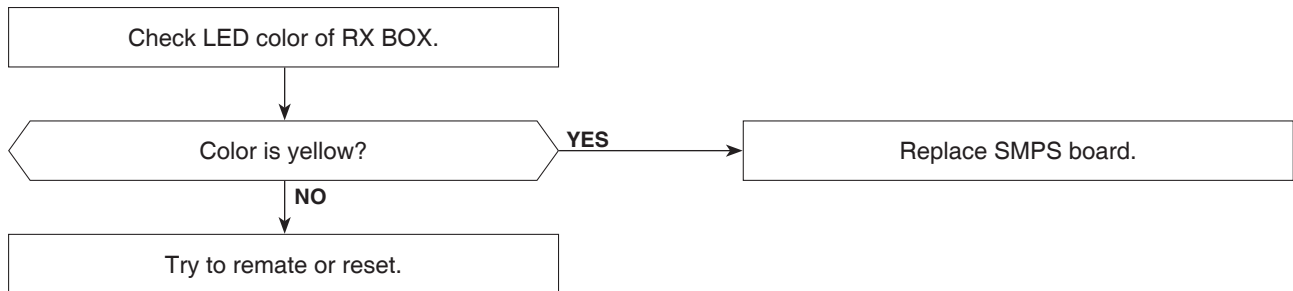
1. How to Duplicate Problem

Wireless rear speaker doesn't output a sound.

1-1. Solution

Replace SMPS board (No PVDD).

1-2. How to troubleshoot (Countermeasure)



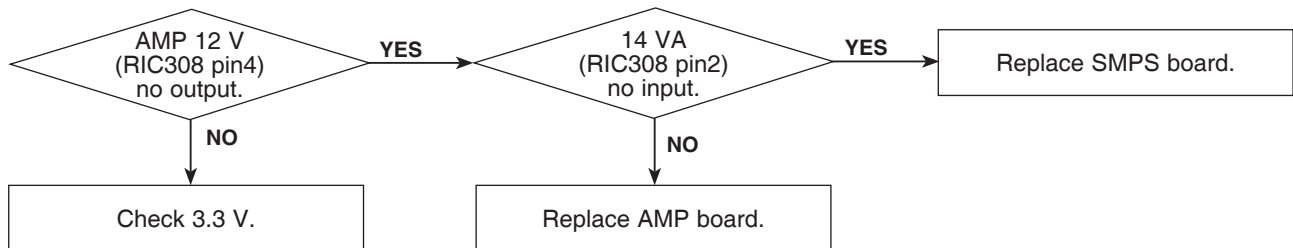
2. How to Duplicate Problem

Wireless rear speaker doesn't output a sound.

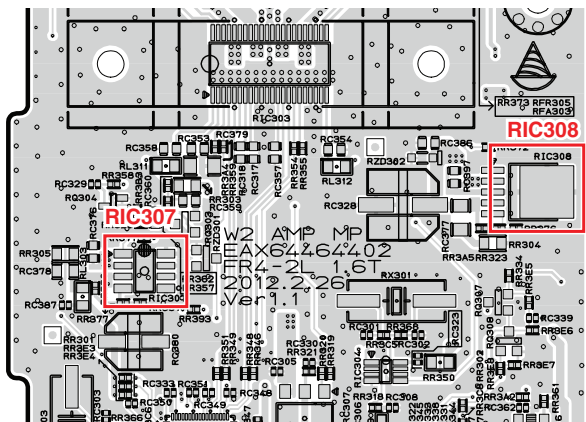
2-1. Solution

Replace AMP board (No 12 V).

2-2. How to troubleshoot (Countermeasure)



2-3. Service hint (Any picture / Remark)



< AMP board top view >

ONE POINT REPAIR GUIDE

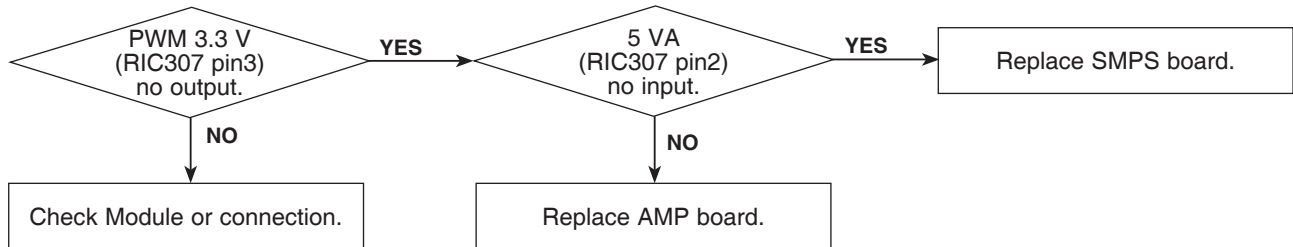
3. How to Duplicate Problem

Wireless rear speaker doesn't output a sound.

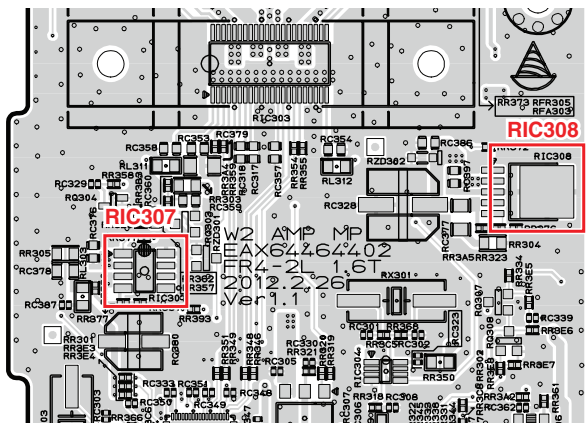
3-1. Solution

Replace AMP board (No 3.3 V).

3-2. How to troubleshoot (Countermeasure)

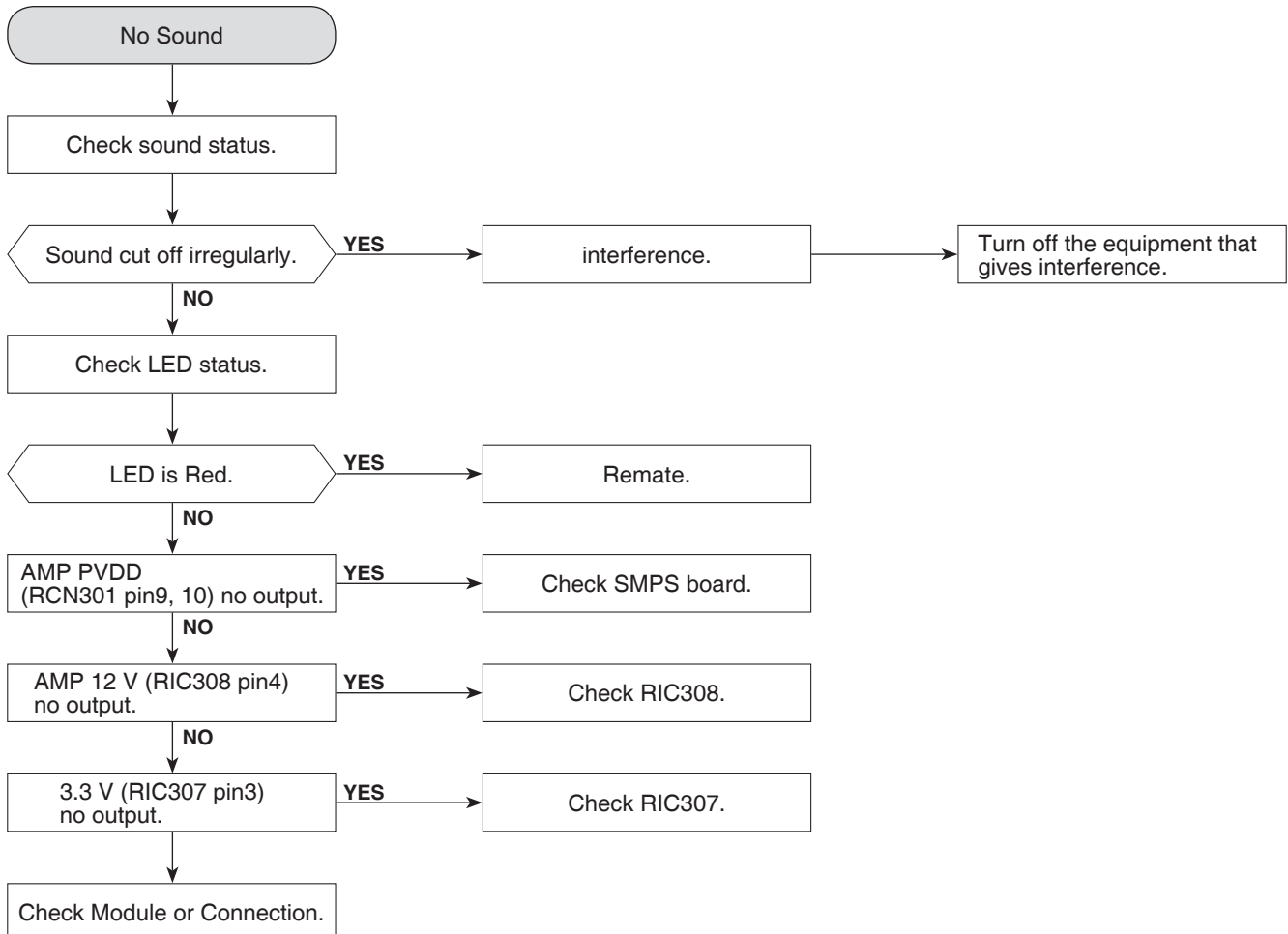
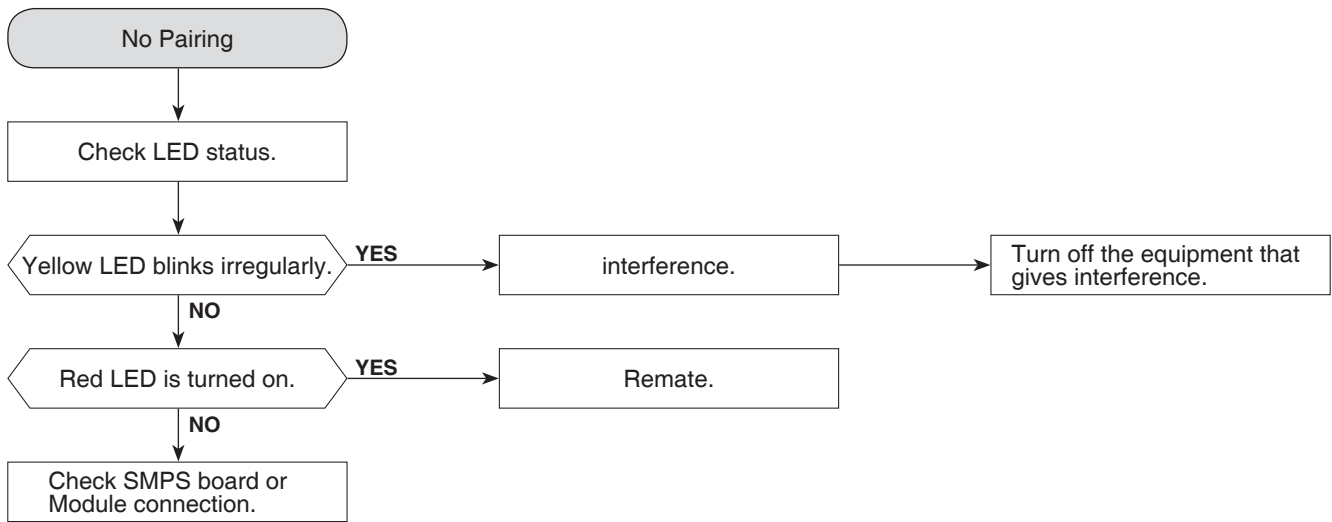


3-3. Service hint (Any picture / Remark)



< AMP board top view >

ELECTRICAL TROUBLESHOOTING GUIDE



WAVEFORMS

1. AUDIO PART (I2S)



RCN303 pin1 : I2S LRCK



RCN303 pin3 : I2S BCK



RCN303 pin20 : I2S Audio Data



CONNECT USING
FFC 0.5mm 26PIN CABLE

2

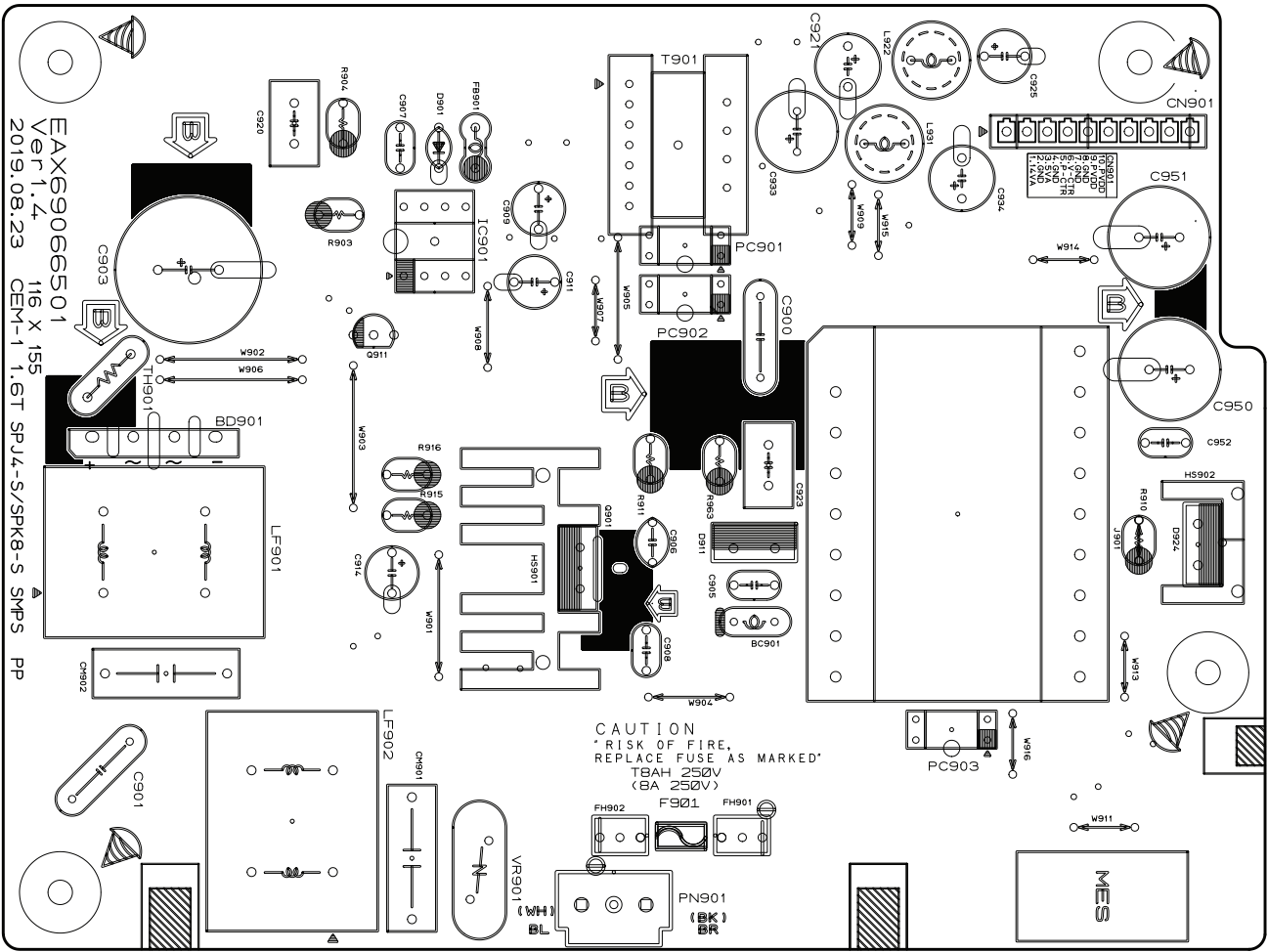
3

MEMO

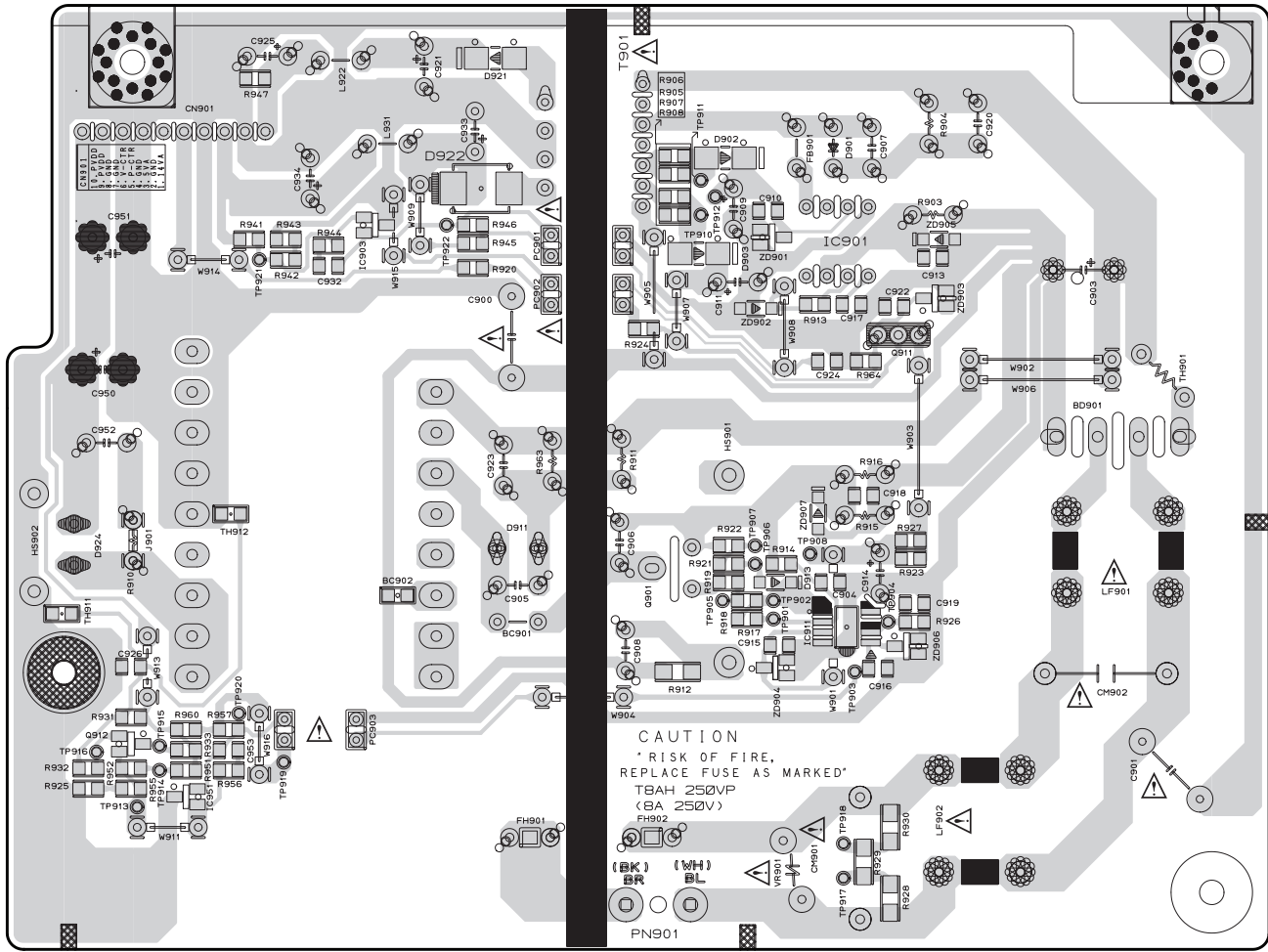
PRINTED CIRCUIT BOARD DIAGRAMS

1. WIRELESS RECEIVER SMPS P. C. BOARD

(TOP VIEW)

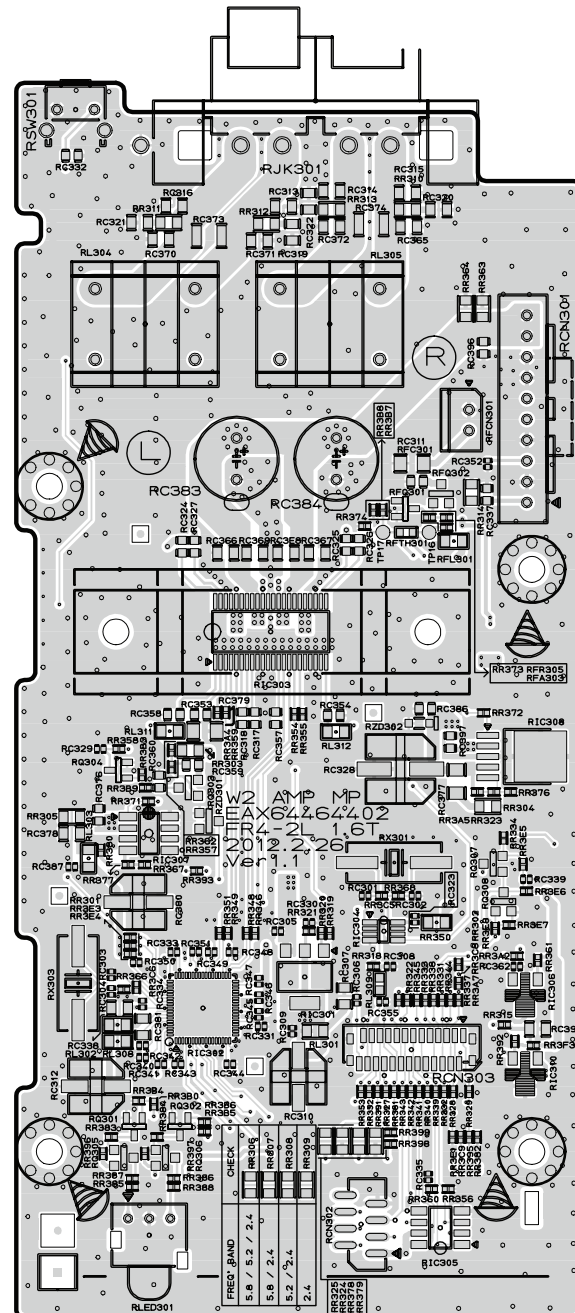


(BOTTOM VIEW)



NOTE) Warning
Parts that are critical with respect to risk of fire or electrical shock.

2. WIRELESS RECEIVER AMP P. C. BOARD (TOP VIEW)



(BOTTOM VIEW)

